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LET THE GOVERNMENT PROTECT EVERY MAN IN HIS RIGHT TO WORK.

THE free miners of Virginia, West Virginia and Alabama are the nation's bulwark and protection against the power of the union men who have gone on strike. These non-union men should receive the heartiest commendation and the strong support of the general public, as should also those operators who stand for the open shop. They render the nation an immeasurable service now, as they have done in the past.

Mr. Lewis, President of the United Mine Workers of America, is urging that Congress intervene and institute Government regulation of the coal industry. Never again, we think, will another Adamson law be enacted. And Government regulation, the public has at last learned, is a mockery as a solution of an economic or industrial problem. The railroads have been regulated into rates that have paralyzed industry. Who wants the experiment repeated with the coal mines? It would but toss the public rights into the porridge bowls of miners and operators.

The Government, State and national, has nothing to do in this strike situation but to insist that peace and order be preserved. There must be rigid enforcement of the law in order that every man who wants to work may have the untrammelled right so to do. It is a right inherently superior to all others—the privilege of a man to make a living for his family. The open shop is Americanism and the closed shop is tyranny.

It might be well to suggest to Congress that the bonus is proposed for the veterans, not for the banks.

A BANKER'S TRIBUTE TO MONEY BORROWERS AS THE MEN WHO KEEP THE WORLD BUSY.

MR. F. E. LYFORD, president of the First National Bank of Waverly, N. Y., in referring to some recent editorials in the MANUFACTURERS RECORD encloses a copy of a letter which he recently wrote to Mr. Hollins N. Randolph, of the Federal Reserve Bank of Atlanta, in which he said:

"I feel that the Federal Reserve people and many of our leading financiers over value themselves and under value the business men of the country, particularly the borrowers. 'In this they are absolutely on the wrong track' for the fact is that borrowers are the most important men in the world, and always have been. They are the ones who have developed this and every other country. Their record entitles them to greater consideration than they have had, and I trust the time will soon come when they will have courage enough to insist on their business demands being taken care of, as they should be, for their good and that of the country at large."

In his letter to this paper Mr. Lyford wrote:

"You state that few bankers care to be quoted and I regret to say that this is very true, but I do not plead guilty, for I have had the pleasure and satisfaction of having articles printed in several magazines criticizing the action of the managers of the Federal Reserve Banks from time to time. As a matter of fact I had quite a long correspondence with Governor Strong when the Federal Reserve Bank first started in New York and finally told him that he could not get the viewpoint of a country banker and never would. He had been brought up wrong. I have seen my statements proven many times since by his actions. * * * In one of my former articles I said that they 'admitted and advised' that they are the greatest banking institution in the world and most of our people believe them, I am sorry to say."

"It would seem that your editorials would jar them somewhat, but they are very thick skinned. I think the only thing that disturbed them in any way was the last fight for an amendment to the act in which the Agricultural Bloc took a hand and won out."

In his letter to Mr. Randolph, Mr. Lyford says:

"Is it possible that it might be a repetition of their action shortly after the war began, when J. P. Morgan & Co. started to float a loan of \$500,000,000 bonds to England and the Federal Reserve Board warned people against buying them; then a week or so later claiming that their first statement was misunderstood."

"I was sore over that action, and have never gotten over it, believing it was the cause of extending the war for at least two years, for five hundred millions freely loaned to England at that time would have meant more than all the billions we let them have later. The Federal Reserve Board certainly showed a lack of vision at that time."

"My memory is that at the beginning of the war economists as well as the Federal Reserve Board 'admitted' several things in regard to financial conditions, and in nearly every case they were wrong."

"Your statement that you think it is the universal rule among all bankers to expect all loans to be taken care of at maturity, or certainly, reasonably taken care of, reminds me of what I read in 'Life' sometime ago."

"Life" stated that a Southern banker said that every borrower from banks should pay off his loans at least once a year, just to show that he could, and that the bank, of course, would lend to him again."

"Life" approved the plan, and suggested that the banks

should do the same thing—pay off their depositors at least once a year, for the same reason, the depositors to put their money back into the banks again. Isn't one suggestion as sensible as the other?

"Investigation will show that at least 75 per cent of loans in banks are renewed, or carried for a long time, and there are good business reasons why this should be so. Add to these the large sums invested by the banks in bonds, and you will simply prove that business is done with long-time loans, not with short-time paper or liquid assets, which are claimed to be very essential to the welfare of the banks.

"Gold, silver and bills are our fractional currency, used in handling two or three per cent of our volume of business, and short-time paper functions for about the same percentage. In my opinion both have been greatly overvalued in regard to their effect on our business conditions. We have been able to advance so rapidly because of long-time credits, and this plan has certainly proven its value. * * *

"My criticism of the action in advancing rates on United States bond loans was that the banks loaded up with these bonds by the insistent tactics of the Federal Reserve Banks were charged the same rates as those who were speculating in them, and thus were being fined for loyal work on their part and that of their customers.

Mr. Lyford is evidently a banker who has banking sense, which, if universal would revolutionize the business interests of the country and quickly bring abounding prosperity. He likewise has the advantage of a backbone strong enough to give his opinion on the subject, but Mr. Lyford in criticising the Federal Reserve Board for its warning to the American people against buying English bonds probably overlooked the fact that at that time Mr. Paul Warburg, a member of the family of the great German banking firm of Warburg Brothers, who had recently settled in the United States, having been a citizen only two or three years or so, was a dominant member of the Federal Reserve Board. And yet even today American people, or at least some of them, seem to pay attention to the views expressed from time to time by Mr. Warburg. His brothers' firm of Warburg Brothers was largely identified with the financing of Germany during the war and Mr. Warburg was a member of the firm of Kuhn, Loeb & Company, which, prior to the war, represented the leading financial interests of Germany. If Emperor William in his far-seeing campaign, had been aiming financially, physically and diplomatically to break down America he could not have done a smarter thing than to secure the appointment of Mr. Warburg as a member of the Federal Reserve System and to shape its initial policy.

We do not charge that he was responsible for Mr. Warburg's appointment, but we do know that the MANUFACTURERS RECORD repeatedly expressed its amazement at the marvelously active propaganda started through the New York and outside papers, for the appointment and confirmation of Mr. Warburg, and we have never been able to understand why this nation had to call into its Federal Reserve System a former German banker—a citizen of America for only a few years, to help formulate its policies and to lay out the plans for its future management.

Was there no native-born American banker equal to the task?

Can anyone give a satisfactory answer to this question?

WHY THEY ARE TROUBLED.

Somebody, a good many somebodies, are troubled. They know Ford at Muscle Shoals means Ford competition, and that is terrific, market-breaking, wage-raising, brain-sweating competition.

If Henry Ford is all wrong, if he is a puttering, doddering, futile and foolish dreamer, then why this muzzing of hair, this tearing of shirts and this rush to discredit a thing that would soon discredit itself? Why are the prophets of failure so anxious to block the experiment? Why this so sudden tenderness and anxiety over Federal funds?

Out of the flood of technical arguments, figures, assertions, charges and counter-charges, these questions stick up like shafts of steel and concrete.—*Philadelphia Ledger*.

They are anxious to block Ford because they don't want a

rank intruder who dares to do things in Ford's way break into their "preserves." They are afraid of his competition and they prefer to fight him in underhand ways now rather than run the risk of his success and having to meet his competition later on.

MORE SIGNS OF BUSINESS IMPROVEMENT

THE steadily increasing construction activity of recent weeks in the South is marked by a new high level for the week of March 30 with a total number of items published in the construction news columns of the MANUFACTURERS RECORD of 1181. The weekly average for the entire month is 1133 or a total of 5664. The average per week for the first three months of the year is 1062, which compares with a weekly average of 915 for 1921.

Other evidences of this growing activity are not lacking. Compare the figures on contracts awarded this year with last. For the first quarter of 1922 the total is \$97,535,884, for the same period in 1921 it is \$54,612,813.

Or take for instance the totals for the corresponding period on projected enterprises, contracts on which are to be awarded later; for 1922, first quarter, this is \$279,589,049 as against \$140,046,387 for 1921.

The high mark for contracts awarded in 1922 is the week of March 16, which shows a total of \$12,247,002.

The sale of bonds is another excellent index of the increasing activity in this section. For the first three months of this year there were 495 issues of bonds sold for a total of \$98,255,100. Bonds for the building of roads, for street paving and the erection of bridges and viaducts rank highest in this total, with school buildings second. Sewer, drainage and water works bonds also make a good record.

Not less striking is the showing made by the lumber mills of the Southern Pine Association for the week of March 24. Sales, production and shipment of lumber increased at an astonishing rate. If sales only had increased it would be of less significance, it might mean simply that buyers were anticipating an advance in price, one or two or several months later. But when the increase is consistent all along the line, when shipments keep pace with greater sales and higher production—it can mean only that the market is reflecting the demand for lumber resulting from the call of those who are erecting homes, building schools and churches and providing for extensions and additions to the tens of thousands of miscellaneous structures of every description in all parts of the South.

These are some of the straws which show that the favorable winds are steadily blowing stronger.

FOR THE EDUCATION OF THE YOUNG.

FROM a Kentuckian comes a letter which says: "You will find enclosed post office money order for 50c for which you will please mail me one of the Blue Books of Southern Progress. I want it for my children. I have no education myself, but I want my children to try to get an education."

The man who wrote that letter must have more of an education than he credits himself with, for education does not always consist simply in book-learning, as desirable as that may be, but realizing his own shortcomings in this respect he now has an ambition that his children shall have a better opportunity for education than he had. He wants to start them out by letting them study something about their own section, that they may know what the South is, and what it has done, and what it is likely to do in the future in the way of material upbuilding. Would that all other men and women in the South might have the same ambition for their children in order that their love for their country and their appreciation of its possibilities might thereby be increased.

The Alabama Power Company and Muscle Shoals.

Alabama Power Company,
THOMAS W. MARTIN, President.

Birmingham, Ala., March 20, 1922.

Editor Manufacturers Record:

We note in the MANUFACTURERS RECORD of the 9th inst. an article on page 62 which you head, "The Muscle Shoals Situation," and several statements in regard to our company which you have made inadvertently, of course, which do not harmonize with the facts. You say, "The threats of the Alabama Power Company to tie up the whole Muscle Shoals situation if their offer is not accepted on the ground that they would be within their legal rights in doing so, is a very dangerous threat." The Alabama Power Company officials, nor either of them, have ever made any such threat.

In the offer submitted by Mr. Ford, he includes as a part of the property he desires, a part of the Warrior steam plant of this company. In order that you may understand just the history of this plant, we will briefly set it forth. The erection of the plant was begun in 1916 to serve as a reserve for our water power system. At first we intended that the plant should have three units and it was completed with the first unit in 1917.

In the MANUFACTURERS RECORD of June 28, 1917 appears a descriptive article on this plant, which says, in part:

"The first unit of the new steam-power plant erected by the Alabama Power Company as an auxiliary to the hydro-electric plant of the Company will be in operation in a few weeks.

"The plant is situated at the point of confluence of Bakers Creek with the Mulberry Fork of the Warrior River, which is approximately 25 miles from the City of Birmingham. This plant was selected by the Company on account of the fact that it is in the heart of the Warrior coal fields, and there is abundant cooling water for condensing purposes."

Later in 1917, the question came up of supplying the Government with power for the purposes of the Nitrate Plant at Sheffield and we finally arranged with the Government that the Government would advance the funds with which to make an extension of this Warrior plant under a contract by which our company would undertake to purchase the extension so created with Government funds. The terms of purchase were to be their fair value as fixed by a board of arbitration after the war.

That you may have all of the facts relating to this plant, I have copied from the proceedings before the House Military Affairs Committee various statements by Colonel Joyes and other representatives of the Government; together with a brief statement of the facts relating to this extension which I have prepared, and these are enclosed. Bearing in mind then, that our company has a definite contract with the Government touching this extension, that the extension cannot be operated separately or segregated from the plant which we owned prior to the war, you will appreciate that we were in the position where we could not do anything but insist upon our legal rights. The officers and directors of this company had no choice except to protect the property which we are managing for the stockholders of the company.

I note your reference to our threat to tie up the whole Muscle Shoals situation by litigation. We are not making any such threat. We cannot understand how the Warrior plant has any proper relation to the water power development at Muscle Shoals and certainly it cannot, in our judgment, be of such vital necessity as to warrant our company in destroying its usefulness as a public service company in this state. I note that you refer to the J. B. Duke interests as controlling various companies, including the Alabama Power Company. Permit me to say that Mr. Duke has no interest, directly or indirectly, in our companies, nor have we any interest in any of Mr. Duke's enterprises. There is no community of interest or relationship between our company and any of the other interests mentioned in your editorial.

Our financial arrangements have been made for many years through Messrs. Harris, Forbes & Company, and Messrs. Coffin & Burr, of New York. They have sold more than \$20,000,000 of our bonds and as we issue further securities, it is our purpose to place them with the investing public through these houses. If you care to make any inquiry of either of these firms, they will, I am sure, be glad to give you any information on this subject which you may desire. Your article has so entirely misconceived the facts that we hope you will in your usual spirit of fairness, correct the same.

Prior to the war, this company owned the Wilson Dam site at Muscle Shoals and adjoining lands, on which we had

expended just under \$500,000. We donated this property to the Government for \$1.00. The MANUFACTURERS RECORD had a very complimentary reference to this donation in issue of February 28, 1918, to which you might refer for any further information on the subject. I also enclose copy of the offer we submitted to Congress on the whole project, together with the comments thereon of the Secretary of War.

You may also be interested in reading the editorial comments of the Birmingham Age Herald of February 5, 1922, concerning that part of the Ford offer which undertakes to have the Government turn over to him the Warrior plant.

We hope that you will make a further study of the matter and that you will give us an opportunity to explain any further matters which may occur to you.

THOMAS W. MARTIN.

We reprint below the articles to which Mr. Martin refers:

The threats of the Alabama Power Company to tie up the whole Muscle Shoals situation if their offer is not accepted, on the ground that they would be within their legal rights in doing so is a very dangerous threat. Unless withdrawn it will do that company more harm than the securing of Muscle Shoals would ever do them good. Already Governor Kilby of Alabama for many years one of the leading business men of the state has vigorously and publicly denounced the Alabama Power Company for its effort to secure Muscle Shoals and warned the people of the state that if the Alabama Power Company should succeed in this it would have the power to throttle the business life of the entire state.

Many corporations sometimes in attempting to stand on what they claim as their legal rights forget the ethical and moral rights of the community. The Pennsylvania Railroad claimed to the MANUFACTURERS RECORD that it was within its legal rights when it cut down the poles of the Western Union along its lines, but the Pennsylvania and every other railroad in the country has ever since been paying the penalty of moral wrong mainly because the Pennsylvania railroad assumed to disregard morals and ethics to the public on the ground that it was within its legal rights.

If the Alabama Power Company is wisely advised by its officers it will not undertake to threaten to tie up by litigation the control of the Muscle Shoals situation and we are quite sure that the American people do not want the J. B. Duke interests which control the American Tobacco Company and the Southern Power Company, the American Cyanamid Company, the Virginia Carolina Chemical Company and the Alabama Power Company tied up in a combination of interests which would have a power too vast for any combination to be permitted to have in this day when people are realizing that aggregated wealth and power, unless curbed by legislation and unless the leaders control it for their own good and the nation's good, may bring about a condition which would destroy their interests and endanger the nation.

It is clear from the above that we made no charge that the J. B. Duke interests controlled the Alabama Power Company. The mutuality of investment in the Alabama Power Company and the American Cyanamid Company, however, is well known. Mr. Washburn, whose control of the American Cyanamid Company during the war was almost absolute, although he withdrew from all activity in connection with the Alabama Power Company after he had brought it into the Muscle Shoals situation, it was testified before a Congressional Committee, remained as a stockholder therein.

The Graham Investigation resulted in a majority and a minority report. The majority report, among other things, found "that the expenditure of over \$5,000,000 for the development of the property of the Alabama Power Company was unjustifiable and unnecessary, and that the same results might have been accomplished by a loan of less than half this amount" and that "the result of this vast expenditure of public moneys has been to build up the property of a private corporation and establish it as a power monopoly in north-western Alabama."

The minority report, among other things, says:

"So far as our record goes the Alabama Power Company does not stand in a favorable light therein. It is largely owned by English capital and the common stock of it, which controls it, is owned by the Alabama Traction Light and

Power Co. (Ltd.), which is a corporation of the Dominion of Canada. We do not mean to imply from the record as we have it that this company has been guilty of criminal conduct, but the conclusion cannot be escaped in the light of testimony we have that at some stages of the proceeding the company appeared to have imposed upon the Government's necessities and unduly forced increases in certain of its facilities."

The majority report also declares that "the Alabama Power Company, when the war began, had a small system and were comparatively poorly equipped. Today they have one of the most modern power stations in the world at the Warrior River, with coal mines electrified and a railroad connecting them with the Southern Railroad Company, many transmission lines, and with a practical monopoly of electric power in the northern and western part of the State of Alabama, and this at Government expense." The Alabama Power Company, the report also declares, proceeded with the expenditure of Government funds to the amount of approximately \$5,167,277.14. "It is probable that aside from the turbogenerator at the Warrior River station, which might be removed at an immense expense, there is not a cent of the expenditure made by the Government for the Alabama Power Company that can be salvaged."

It is only fair to say, in the circumstances, that the war proved of great advantage to the Alabama Power Company, in the light of the testimony, and brought it into the adult state from its condition of infancy.

Moreover, the fact is established that the State of Alabama has treated the Alabama Power Company with extreme courtesy and consideration, granting it valuable rights under terms of great leniency, exempting it from taxation and doing all things possible to aid it in its exploitation of the water-powers of the State. And what do the people of Alabama feel has been the return given by the Alabama Power Company? A State-wide mass meeting, held in the city of Montgomery, March 1, 1922, adopted resolutions declaring, "We remind Congress that just as the Alabama Power Company has returned evil for good to the people of Alabama, so it is the one corporation whose dealings with our country in the grim emergency of war was so shameless, selfish and conscienceless that when its conduct was investigated by a select Committee of Congress the minority members of this committee joined with the majority in denouncing its brazen and sordid betrayal of its duty to a war-beset nation." These are strong words, which might be mitigated by the full record of the testimony, but it is fair here to quote them because they illustrate to what an extent the corporation has, in less than a generation of corporate life, alienated the good wishes and achieved the hostility of those consumers most intimately dependent on its activities. It does not behoove any corporation, in such circumstances, to be too prominent in its antagonism to a relief measure demanded by the people.

It may be as Mr. Martin says, that his company has made no threat to tie up the Muscle Shoals situation by litigation, but the resolutions adopted by the State-wide mass meeting at Montgomery to which we referred above, specifically stated that "It (the Alabama Power Company) now threatens to litigate with Henry Ford, or with the Government, if either seeks to build Dam No. 3 at Muscle Shoals, or to control the Government-built steam plant and transmission at Gorgas." We cite this as an example of the fact that the position of the Alabama Power Company is generally construed to carry with it the idea of a threat. Indeed, in his own letter, after averring that there is a definite contract with the Government as to purchase of the Gorgas plant, Mr. Martin says, "We were in the position where we could not do anything but insist upon our legal rights." Obviously, the company does intend to exhaust all legal remedies in an effort to secure ownership of the Gorgas plant, which happens to be an integral part of the Ford offer. It is not surprising, therefore, that an announcement of such intention is construed as a threat to tie-up the Ford proposition by legal proceedings.

We cannot undertake to anticipate the decision of the courts, but this extract from the speech of Representative Almon before the Military Affairs Committee of the House is interesting:

"The Alabama Power Company also claims an option to purchase the Gorgas plant and transmission line from Gorgas, Ala. to Muscle Shoals. The Judge Advocate General has also decided that this is void. Attorneys for the Alabama Power Company and my colleague, Mr. Oliver, have discussed at length every feature of the contract and transactions between the Government and the Alabama Power Company, in connection with the Gorgas plant and transmission line from Gorgas to Muscle Shoals, and I deem it unnecessary to undertake to add anything to what has been said. I take for granted that you will act upon the opinion of the Judge Advocate General."

It is true that army officers have testified to the contrary, and it is also true that the officers of a corporation cannot honorably sacrifice the valuable rights of stockholders, but it is not unlikely, we venture to suggest, that a way out of this dilemma could be found were a sincere effort made to do so without the necessity of long delay in the treatment of the Ford offer.

It is a principle of equity that a litigant must come into court with clean hands. A year ago the Secretary of War declared that he could not ask Congress to provide money to complete the Wilson Dam unless assured of a market for the power developed. So he wrote to water power companies and others on that point. We do not know that the Alabama Power Company was asked or replied, but at least one other power company did reply and its verdict was that Muscle Shoals was an impracticable development and ought not to be completed, while the President of the Alabama Power Company announced, later, that it would not submit an offer for the Muscle Shoals property. Why, then, an offer now? And why is it that the people of Alabama are convinced that it is the deliberate intent and purpose of the Alabama Power Company to wreck the Ford proposal? If that is a foul suspicion, untrue and unworthy of the people of Alabama, let Mr. Martin now, for his company, specifically so state. It is charged that his company has a monopoly in northwest Alabama and seeks to continue and enlarge it. Men whose vision is large and whose hearts are set on the consummation of Ford's great dream want to know if the Alabama Power Company's attitude springs from hostility to particular features of the Ford program or if the company is opposed to any and all competition in its territory.

We have commended, as we shall always commend, all constructive development of the resources of the South, and we believe in favored treatment for aggregations of capital that are willing to take great risks in exploiting undeveloped resources. We have not failed to commend the Alabama Power Company in many of its progressive undertakings. But we cannot ignore the verdict of the Graham Committee or the facts as to the company's attitude on Muscle Shoals since the Armistice. We cannot find grounds to depart from our opinion that the Alabama Power Company has already all the water-power it needs or should be permitted to have in Alabama and that it should by no means be allowed to get control of Muscle Shoals. And this would be true even if the ownership of the company were native American.

We cannot find that we have in any way misrepresented the Alabama Power Company. Indeed, we want now to repeat the warning in our previous article. No corporation is bigger than the people under whose authority and permission it exists. There must be an unselfishness and patriotism in corporations as in individuals, and they, too, must have their vision of national development, that willingness to submerge self in the greater good, that is a characteristic of honorable citizens. They cannot with impunity flout public opinion and they cannot block progress. The wages of that sort of sin, it long ago was written, is death.

Large Bond Sales South an Index of Increasing Activity in Public Improvements—Nearly \$100,000,000 for First Quarter 1922.

A compilation of bonds issued and sold in the sixteen Southern states as reported weekly in the Financial News columns of the MANUFACTURERS RECORD shows that during the first three months of 1922 the par value of 495 issues sold amounted to \$98,255,100. The sale of this huge total of bonds indicates that cities, counties and states are taking advantage of present financial conditions and seizing the opportunity to get necessary and long-delayed construction under way. During the latter part of 1921 millions of dollars in bonds were voted and sold, with the result that contracts aggregating large sums were awarded, and contractors were thus enabled to get materials in line and organize their forces before general building activity had begun. The volume of this work now under way is enormous.

Roads, paving, bridge and viaduct construction holds first place in the value of bonds sold, the total being \$28,170,750,

March. The remainder of miscellaneous bond issues, includes those for funding, fire equipment, wharves, hospitals, incinerators, city, county and state improvements, courthouses, city halls, electric and power plants, etc. Construction of sewers, drainage, water works and irrigation projects in many Southern states is provided through the sale of 95 issues of bonds totaling \$11,400,500.

The construction activity evidenced by the sale of these bonds for specific purposes is strikingly emphasized by the summary of contracts awarded and to be awarded as compiled from the construction news items and published in these columns monthly.

Bonds sold in March totaled \$45,111,600. In January the total was \$36,700,250, in February, \$16,443,250. The interest on the bonds varied from 4 to 7 per cent, and the vast majority sold for par, accrued interest and a premium.

SUMMARY OF BOND ISSUES BY CLASSIFICATIONS AND BY STATES. NUMBER AND VALUE OF BONDS ISSUED BY MONTHS.

JANUARY.					
	ROADS	SCHOOLS	SEWERS	MISCELLANEOUS	TOTAL
Alabama	2 \$100,000	2 \$23,000	..	..	2 \$100,000
Arkansas	..	5 698,000	5 \$282,500	4 \$380,000	20 2,108,000
Florida	6 747,500	2 37,500	..	1 100,000	6 1,122,500
Georgia	3 985,000	..	1 600,000	..	1 600,000
Kentucky	..	4 801,000	1 46,000	4 8,165,000	16 10,671,000
Louisiana	7 1,659,000	..	2 560,000	..	2 560,000
Maryland	..	4 198,000	..	..	6 388,000
Mississippi	2 190,000	3 504,000	1 515,000	..	1 1,019,000
Missouri	..	11 5,702,000	1 25,000	4 374,000	24 7,710,000
North Carolina	8 1,609,000	1 110,000	2 125,000	4 387,000	8 822,000
Oklahoma	1 200,000	..	4 185,000	..	9 872,000
South Carolina	5 687,000	3 155,000	..	1 100,000	9 752,000
Tennessee	5 497,000	11 1,535,000	12 1,901,000	6 490,000	46 8,819,750
Texas	17 4,893,750	2 350,000	..	..	3 770,000
Virginia	1 420,000	5 363,000	..	..	5 363,000
West Virginia	..	..	..	..	..
Totals	57 \$11,988,250	53 \$10,476,500	29 \$4,239,500	24 \$9,996,000	163 \$36,700,250
FEBRUARY.					
Alabama	1 \$200,000	2 \$335,000	..	2 \$241,500	5 \$776,500
Arkansas	1 100,000	1 35,000	..	5 589,000	7 724,000
Florida	3 187,500	2 180,000	4 \$795,000	3 225,000	12 1,387,500
Georgia	4 276,000	4 3,081,000	3 203,000	1 3,000	12 3,563,000
Kentucky	..	2 25,000	4 284,000	1 25,000	7 334,000
Louisiana	3 260,500	1 50,000	1 100,000	1 250,000	6 680,500
Maryland	1 250,000	2 415,000	2 325,000	1 500,000	6 1,490,000
Mississippi	2 650,000	1 40,000	..	1 70,000	4 760,000
Missouri	1 250,000	1 95,000	2 147,000	..	4 492,000
North Carolina	6 634,000	5 370,000	3 89,000	3 236,000	17 1,329,000
Oklahoma	..	1 275,000	3 165,000	4 126,000	8 566,000
South Carolina	..	3 146,000	..	..	3 146,000
Tennessee	3 109,000	2 610,000	2 200,000	1 500,000	8 1,419,000
Texas	6 1,350,000	12 514,500	3 279,000	5 322,250	26 2,465,750
Virginia	1 125,000	1 130,000	..	..	2 255,000
West Virginia	..	1 75,000	..	..	1 75,000
Totals	32 \$4,392,000	41 \$6,376,500	27 \$2,587,000	28 \$3,087,750	128 \$16,443,250
MARCH.					
Alabama	1 \$50,000	1 \$250,000	1 \$60,000	2 \$1,250,000	5 \$1,610,000
Arkansas	3 535,000	1 50,000	..	1 1,075,000	5 1,660,000
Florida	10 2,263,000	1 28,000	2 80,000	4 2,147,000	17 4,518,000
Georgia	1 500,000	3 1,620,000	2 800,000	..	6 2,920,000
Kentucky	1 32,000	3 1,182,000	..	..	4 1,214,000
Louisiana	3 351,000	2 130,000	..	..	5 481,000
Maryland	2 40,000	..	..	1 190,000	3 230,000
Mississippi	3 437,000	5 201,000	3 127,000	3 183,000	14 948,000
Missouri	1 75,000	1 22,000	7 1,280,000	1 15,000,000	10 16,377,000
North Carolina	17 3,267,500	16 1,396,000	10 980,000	10 1,108,500	53 6,752,000
Oklahoma	3 115,000	3 95,000	4 430,000	3 235,000	13 875,000
South Carolina	5 200,000	1 100,000	3 152,000	..	9 542,000
Tennessee	5 443,000	3 205,000	1 15,000	3 337,000	12 1,000,000
Texas	11 2,982,000	11 800,000	9 650,000	6 485,000	37 4,917,000
Virginia	2 370,000	2 47,000	..	3 580,000	7 997,000
West Virginia	1 40,000	..	..	1 30,000	2 70,000
Totals	69 \$11,790,500	55 \$6,126,600	42 \$4,574,000	38 \$22,620,500	204 \$45,111,600
TOTAL—First Quarter..	158 \$28,170,750	149 \$22,979,600	118 \$11,400,500	90 \$35,704,250	495 \$98,255,100

representing 158 issues for January, February and March. School construction and repairs, and necessary equipment is provided for by 149 issues of bonds with a par value of \$22,979,600. Bonds listed under "miscellaneous," have a total value of \$35,704,250 representing 90 issues; of this amount \$15,000,000 is for soldier bonus bonds of Missouri sold during

Nobody has charged that the freight rates are too high where speed is concerned. At the rate of movement usual with the ordinary freight car, it has been estimated that the time required to move a ton of iron to Mars would be infinity squared plus the cube of the Einstein theory.

A TARIFF BILL UNDER WHICH AGRICULTURE CAN PROSPER.

ON behalf of the 25 Republican Senators who joined themselves together in a formal bloc for the purpose of seeing that the new tariff bill give adequate protection to the agricultural interests of all sections, Senator Gooding has announced that the new measure is the "first all-American tariff bill in our history."

We have not the bill before us, as it has not yet been reported, but important agriculturists who are aware of some of its provisions are convinced that it foreshadows a new era of farm prosperity in the United States. "The effect of the bill," says a prominent Western banker, "if it is enacted, will enhance the value of farm lands in all parts of the nation, and this increment, further magnified by good roads, will go a long way toward payment of the national debt."

It would be a monstrous thing for Southern politicians, for purely political reasons, to oppose those just provisions of the proposed law that are certain to translate themselves into dollars and cents in the bank accounts of Southern producers. In adequate tariff protection there is for the South more than full compensation for all losses occasioned by the boll weevil. Now is the opportunity for the South to break away from an economic error of traditional importance but economically disastrous. No section of the nation needs protection more than does the South if it to come into the full enjoyment of its unparalleled potentialities.

RAILROADS ORDERING MORE EQUIPMENT.

ORDERS for eight thousand freight cars and fifty locomotives received by car and engine building plants within one week direct attention strongly to the improved position of the railroads generally and their efforts to extend and better their facilities. Since the beginning of the year, equipment orders reported display an increase of about forty per cent as compared with the corresponding period of last year and the total of about 35,000 cars already under contract gives promise of a greatly improved season for the car building and engine building industries.

Of the 8000 cars reported ordered in a single week, 4000 are for the Norfolk & Western Railway and 4000 for the Chicago, Milwaukee & St. Paul Railway. As for the locomotives, 25 of them are for the Philadelphia & Reading Railroad while the rest are well distributed among other lines. It is expected that the St. Paul system will be in the market later for 50 engines and the Louisville & Nashville Railroad is already inquiring for 10 engines while the New York Central is in the market for 50 switchers. Car orders reported pending include 2000 box cars for the Southern Pacific Lines, and from 1000 to 1500 coal cars for the Louisville & Nashville Railroad. Orders for passenger equipment are comparatively small, but the Missouri, Kansas & Texas Railway and the Chesapeake & Ohio Railway are asking bids for a total of about 100 cars.

Other favorable news appears in recently issued monthly statements of several lines for February. For instance, the Pennsylvania Railroad shows net railway operating income for the month of \$6,394,729, an increase of \$8,226,007 as compared with February of last year when there was a deficit; the Baltimore & Ohio reports \$2,071,125, an increase of about \$2,010,000; Philadelphia & Reading, \$2,040,359, an increase of more than \$1,500,000 and so on. These are significantly large straws to show which way the wind is blowing. Traffic statistics display very gratifying gains and the number of cars loaded weekly has been increasing for several weeks.

PERMANENT INJUNCTION GRANTED AGAINST FEDERAL RESERVE BANK OF RICHMOND.

THE validity of the North Carolina law according banks the option to make a clearance charge on checks has been fully sustained in a decision handed down by Judge Webb. The effect is to make permanent the injunction restraining the Federal Reserve Bank of Richmond from refusing to accept exchange drafts from approximately 275 North Carolina banks. It is stated that the case will be appealed and it will probably finally go to the United States Supreme Court.

As a result of what the United States Supreme Court has already called the "warfare" carried on by the Federal Reserve Banks against State institutions, the legislature of North Carolina determined to protect the State's own banks against such assaults. Appropriate legislation was enacted, the validity of which was promptly questioned by the Richmond Federal Reserve Bank, which seems to have been under the impression that it was superior to State laws and carried in its vest pocket the sovereignty of the Union.

Not only is the decision of Judge Webb illuminating and instructive, but it indicates that the several States have it within their own power at least to limit the aggression of the Federal Reserve System, and we do not doubt that many States, in addition to those which have already acted, will now follow the lead of North Carolina and be active in the protection and preservation of their own domestic financial institutions.

THE AMERICAN SOLDIERS.

IN commenting upon what it calls "the overwhelming vote by which the Veterans' Compensation Bill passed the House" the Boston Transcript says:

"The President, the Senate and the House are jointly responsible in this matter, and they will be held to the same 'strict accountability,' for behind the American Legion stand the plain people of the nation who in their hearts deeply resent the vilification of the veterans to which many newspapers and propaganda have resorted in a vain effort to make of the solemn pledge of the President of the United States 'a scrap of paper.'"

We are glad the Transcript, one of the ablest and most responsible newspapers in this country is thus in entire harmony with the position which the MANUFACTURERS RECORD has taken in the fight for an adjusted compensation to the American soldier; and it likewise is in harmony with the views which this paper has expressed in denunciation of the big business interests and the banking circulars and the newspapers which have been guilty of denouncing the American Legion and calling its members unpatriotic because they have been pressing this matter upon public attention.

If Lloyd George can recognize Lenin, it would seem to be within the realm of possibilities that this country might recognize Obregon. Some people who ought to know what they are talking about say that Obregon is one of the leading statesmen in the world today; and they likewise suggest that there is more cash business to be got in Mexico than in all Europe. Did not the man who searched the world for acres of diamonds finally find the mine he was looking for right in his own back yard?

The solicitude of his enemies lest Mr. Ford suffer heavy losses in his Muscle Shoals venture is positively heart-rending. Yet no man within the memory of humankind ever made so much money in so short a time, with so little criticism, as this same Mr. Ford. It has been said that he was ridiculed into prosperity. Maybe so, but we suspect that his enemies fear Muscle Shoals may become a gold mine instead of a gold sink.

Big Hydro-Electric Operations in Carolinas and Elsewhere South.

By ALBERT PHENIS.

Charlotte, N. C., March 31, 1922.

On top of its investment of \$60,000,000 to \$65,000,000 in hydro-electric developments in the Piedmont section of North and South Carolina, the Southern Power Company is spending another \$10,000,000 at this time on a new dam, two power houses and various transmission lines. All the machinery, equipment and materials necessary have been bought, work is under way, and completion is expected by or shortly after January of next year.

The significance of this fact is that there is demand right now for all the additional power this company can supply, and every year since the company began operations there has been an increase in power furnished. Each year, even during the depression, has shown an improvement on the preceding year, until now, with an actual load of 230,000 to 235,000 K.W., the company is turning out 75,000,000 to 80,000,000 K.W. hours a month. Eighty-five per cent of the 11,000,000 spindles installed in the Carolinas are served by the Southern Power Company's network of transmission lines, as are also numerous electric car lines and lighting plants in the section. Individual power plants have ceased to be operated in the territory covered, and the supply of hydro-electric power has been a factor in attracting new industries from year to year. A present development is the location of finishing plants in the textile line, financed both by local and outside capital.

The present development of the Southern Power Company—and in addition there are a number of lesser companies serving various other sections of the Carolinas—is equal to 290,000 K.V.A., speaking in terms electrical, and the additions under way will give 131,000 further K.V.A. With the present capacity it would require 1,000,000 tons of coal a month to replace the 80,000,000 K.W. hours taken by the various industries. The freight alone on this coal would amount to \$5,600,000, so that if bought at the mine at \$2 a ton, it would cost more to merely lay the coal down at a power plant, without considering the cost of making steam, than the hydro-electric power costs the factory, which averages a cent a kilowatt hour, according to a statement by a company official.

With relatively cheap and always available hydro-electric power, the Piedmont section is an increasingly attractive location for industries, and it is a notable fact that the effects of the depression were not so deeply felt nor of so long duration as in sections where less favorable conditions prevail. While there was curtailment of operation last year, to some extent, the movement is now all the other way, and the brightly lighted factories seen at night along the railway are visible evidences to even the casual observer that there is activity throughout the industrial Carolinas. Testimony to that effect is furnished by machinery men, bankers and others, besides the purveyors of power. Last year there was a closing down tendency; this year there is an opening up, all along the line, more pronounced in some directions than in others, but the improvement is unmistakable and undisputed. Last year, to use a miners' simile, people were in an empty bucket going down; this year they are in a filled bucket coming up.

There is a great deal of delayed building activity of various kinds, held up for diverse reasons, and now going ahead because the demand is pressing, and more favorable prices for materials and labor remove objections which have heretofore proved a deterrent. The Southern Power Company

is two years behind in its building program, and this is typical of a fact applicable to all kinds of construction to meet a shortage which has long existed, and work on public buildings, schools, churches, etc., is going ahead in an accelerated way.

The spirit and the activity of Charlotte reflect conditions that are state-wide, and the declaration is often made that North Carolina, as a whole, has more generally recovered from the depression than almost any other section. Belief in the certainty of progress and prosperity is inspired by appreciation of what North Carolina is, has and does, as illustrated in this candid recital in a recent issue of the "Charlotte News:"

"In the percent of value added to her raw materials by manufacturers, North Carolina leads all the manufacturing states. She is second only to Massachusetts in the manufacture of cotton goods; Her tobacco manufacturers lead the world. She has 333 more textile mills than her next best Southern competitor. She leads the South in mills dyeing and finishing their own products. She leads the South in the making of cheese and the manufacturing of furniture. She has the biggest hosiery mills and the biggest towel mills in the world; the biggest denim mills, damask mills, and underwear factory on the face of the civilized globe. And among the people, who grow rich on the bigness of her blessings, are the highest birth rate and the lowest death rate in America."

In the stability, the growth and the prosperity of the Piedmont section, where the important industries are clustered, the magnitude of the hydro-electric development unquestionably plays a major part. The value of a comprehensive plan of development was demonstrated during the year just closed. As is likely to occur in any year, there was a low stage of water during the late summer and early fall in the streams of the Piedmont section. The Southern Power Company had built an immense reservoir at Bridge-water at the headwaters of the Catawba. Filled to its capacity by July, 1921, this reservoir held behind three dams almost a billion gallons of water. At end of the year this reservoir was forty-seven feet below its July level, having contributed two thirds of its total capacity to enable the hydro-electric stations of the Southern Power Company located below Bridgewater, as well as a number of other water power stations not connected with that company, to operate at practically full capacity. The systems in the East part of the state were especially sufferers from the drought, and the mills they served would have been compelled to shut down at one time had the Southern Power Company been unable to afford assistance. By exchanges of load, some power was also passed on from the Alabama Power Company, and at one time it was proposed to start the Gorgas steam plant, in the Muscle Shoals section, so that by a series of exchanges the mills of Eastern Carolina might be served. Before anything was done in this line, however, the rains set in and the crisis was passed.

The experience with the Southern Power Company and the Alabama Power Company was demonstrative, however, of the simplicity of operation involved in the exchange of power, affecting a wide range of territory. It also demonstrated the necessity of reservoir construction for water conservation. It is known of all engineers that the magnitude of the primary power development at Muscle Shoals depends on reservoir construction at points above the dam at Muscle Shoals. At flood stage an enormous horse power development would occur at Wilson Dam, but at the lowest stage of the seasonal ebbs, were there no conservation through

storage in reservoirs in the upper reaches of the Tennessee, the available power in times of extreme drought would fall, so the opinion has been given, to as low as 80,000 horse power. The experience of the Southern Power Company the past year has demonstrated the necessity of the reservoirs, as an assurance of needed horsepower when the streams run low. These reservoirs are also of tremendous value in preventing floods by impounding waters during times of heavy rainfall.

In connection with the activities of the Southern Power Company, some interesting experiments are being made at the company's plant at Mt. Holly, where an Austrian chemist, I. Hickenbleikner, has been at work for some time on the production of phosphoric acid in an electric furnace. At this place during the war J. B. Duke carried on experiments in the fixation of nitrates from the air. Hickenbleikner is reported to have produced in commercial quantities, phosphoric acid for food products and for fertilizer. I was unable to get in touch with Mr. Hickenbleikner, but I understand that using an electric furnace, he employs the water absorption method of producing phosphoric acid from phosphate rock.

Before the Committee on Military Affairs, in the hearing on the Henry Ford Muscle Shoals proposition, Theodore Swann, of Anniston, Ala., gave in detail some very interesting testimony in February of this year as to the results of his efforts to produce phosphoric acid at his Anniston electric furnaces, which produced ferromanganese during the war, but which could not be operated at a profit when ferromanganese met English competition after the close of the war. Swann's activities were mentioned by me to some eminent chemists whom I met in New York recently, when I was told that Mr. Swann has succeeded in producing phosphoric acid for both food products and fertilizers, in commercial quantities, and the opinion was expressed that the development contained rather vast potentialities of advantage to the South. The electric furnace is practicable only where cheap hydro-electric power can be obtained. It will be of much interest to follow the possible outcome of these altogether new lines for the utilization of water power for the development of the resources of the South.

Substantial Increase in Industrial Activity South as Shown By Summary of Construction Items Published.

The summary herewith prepared from information of activities published in the construction columns of the MANUFACTURERS RECORD during March, shows in practically all lines substantial increase over the number of similar items for February, and the total establishes a high record for building activity.

During the month just closed a total of 5,664 items was published, and for the first quarter of 1922 the total is 13,960, a remarkable record considering the season. The average number of items published weekly is 1074, compared with 1143 for 1913, the highest year of which we have record, and with 1138 in 1914.

Last month 2401 industrial items were published compared with 2066 similar items for March 1921, 1887 for February 1922, and 1610 for January. Miscellaneous building items numbered 1429, compared with 1411 for March 1921, and 1185 for February of this year. Financial items reached a total of 731, during March, compared with 529 for the preceding month. Machinery, proposals and supplies wanted notices for March total 904, compared with 736 for March 1921 and 758 for February this year.

Roads, paving and bridge items set a new high record with a total of 571, compared with the totals of 415 and 324 for February and January, respectively. The total items of this character published in the first quarter is 1291, com-

pared with the total for the same period last year of 1136. Miscellaneous enterprises show a striking increase over preceding months in the number of notices published, the March total for this classification being 206, and total of 456 for three months.

School buildings stand second in importance, numbering 319 for last month, and 825 for the first quarter. Construction of this character is being vigorously advanced in practically every section, and millions of dollars in bonds are being voted and sold to care for long delayed building programs in this important classification. The home building program is going steadily forward, and there has recently been a notable increase in the number of dwellings erected costing \$10,000 and over, 303 announcements concerning such construction being made last month with a total to date of 690.

With the construction of many miles of improved roads goes the erection of necessary bridges, culverts, etc., and items of this character aggregate 139 in March, and 367 for the first 13 weeks this year. Thus a total of 691 road and bridge notices appeared in the construction columns during the past five weeks, and 1659 such notices in the past 13 weeks.

Industrial Developments.

	Mar.	Jan.-Mar.
Airplanes, Stations, etc.	2	3
Bridges, Culverts, Viaducts, etc.	139	367
Canning and Packing Plants	24	66
Clayworking Plants	16	34
Coal Mines and Coke Ovens	46	111
Concrete and Cement Plants	8	19
Cotton Compresses and Gins	17	35
Cottonseed-Oil Mills	1	5
Dairage Systems	28	71
Fertilizer Plants	116	257
Flour, Feed and Meal Mills	5	14
Foundry and Machine Plants	20	53
Gas and Oil Enterprises	35	76
Hydro-Electric Plants	79	242
Ice and Cold Storage Plants	7	23
Iron and Steel Plants	89	190
Irrigation Systems	3	8
Land Developments	0	6
Lumber Manufacturing	70	179
Metal-Working Plants	39	99
Mining	35	83
Miscellaneous Construction	27	66
Miscellaneous Enterprises	63	163
Miscellaneous Factories	206	456
Miscellaneous	199	571
Motor Cars, Garages, Tires, etc.	122	313
Railways	24	58
Railway Shops, Terminals, Roundhouses, etc.	4	9
Road and Street Construction	552	1,291
Sewer Construction	139	307
Shipbuilding Plants	2	5
Street Railways	1	6
Telephone Systems	32	69
Textiles Mills	25	90
Water-Works	182	405
Woodworking Plants	53	148
	2,401	5,898

Buildings.

Apartment Houses	91	223
Association and Fraternal	57	130
Bank and Office	71	183
Churches	146	326
City and County	34	114
Courthouses	13	40
Dwellings	303	690
Government and State	11	23
Hospitals, Sanatoriums, etc.	42	131
Hotels	45	113
Miscellaneous	54	140
Railway Stations, Sheds, etc.	14	32
Schools	319	825
Stores	179	447
Theatres	21	55
Warehouses	29	98
	1,429	3,570

Financial.

Corporations	99	223
New Securities	632	1,529
	731	1,752

Machinery, Proposals and Supplies Wanted

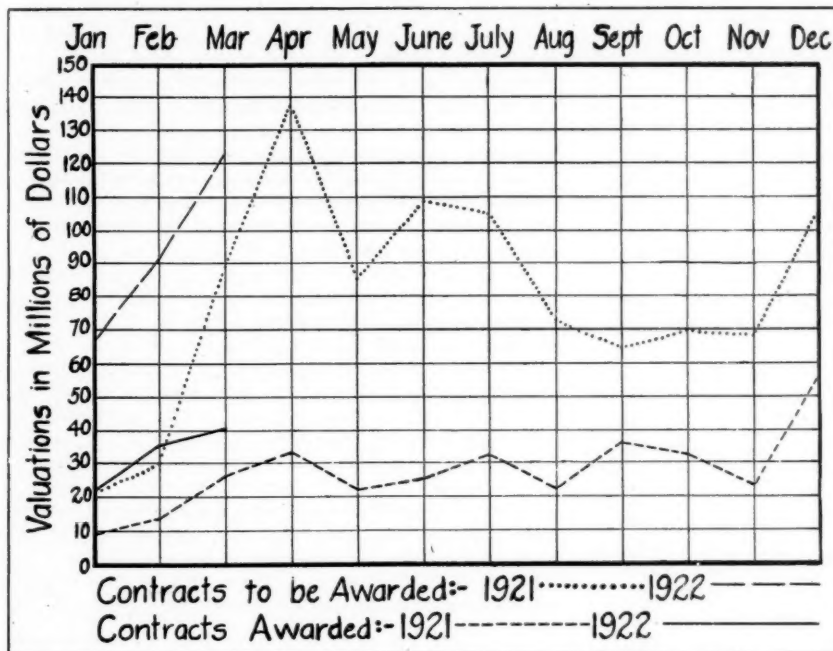
	904	2,256
Totals	5,465	13,476
Fire Damage.	199	484
	5,664	13,960
Foreign	0	3

Nearly \$100,000,000 in Contracts Awarded in the South for First Quarter of 1922.

Building contracts awarded in the sixteen states of the South and Southwest during the first three months of 1922 represent a total expenditure of approximately \$97,535,984, and during the same period preliminary announcements of contemplated construction projects show an expenditure aggregating \$279,589,049. That 1922 will be a big construction year is evidenced by the big total of contracts thus awarded during the normally lean months of the year, added to the large carry-over from the last quarter of 1921 when contracts let totaled \$110,171,489, while the sum of \$241,773,777 represented projects initially announced. Considering the

gained by a comparison of the figures for the first quarter of 1922 with those of the preceding year, contracts awarded for this period of 1921 totaling \$54,612,813, and proposed construction then announced involving an expenditure of \$140,046,387.

A high record for the first quarter of 1922 was established in contracts awarded for the week ended March 16, the valuation being \$12,247,002, an exceptionally high figure considering the season and clearly indicative of the vast amount of building of all kinds that is already under way and planned for early construction.



reduction that has taken place since 1920 in construction costs the total for the first three months of 1922 is quite remarkable, and there is every indication that this year will see an even greater volume of construction activity than 1921, which surpassed all previous records.

An idea of the tremendous increase in building may be

gained by a comparison of the figures for the first quarter of 1922 with those of the preceding year, contracts awarded for this period of 1921 totaling \$54,612,813, and proposed construction then announced involving an expenditure of \$140,046,387.

Miscellaneous enterprises, including garages, theatres, warehouses, electric light plants, hydro-electric developments, oil refineries and miscellaneous projects of many kinds held first place in contracts awarded, giving evidence of the widespread character of the construction. Awards for this classification totaled \$27,821,839 during the last three months, the high figure being recorded in February when the total was \$13,871,700. Roads, paving and bridge projects ranked second with a total of \$26,745,321, while school building contracts awarded amounted to \$11,818,633. In projects planned for the near future, roads, paving and bridge stood first with a total of \$67,892,282, while miscellaneous enterprises ranked second, totaling \$66,912,227. School buildings stood third in contemplated work involving \$38,805,700.

Construction of sewers, drain-

age and waterworks together with municipal, county and state work of similar character promise to figure prominently in the general expansion program of 1922. The building of dwellings, apartment houses, hotels, churches and bank and office buildings is going forward at a steady pace.

SUMMARY BY CLASSIFICATIONS, FIRST QUARTER—1922.

	Contracts to Be Awarded.			
	March.	February.	January.	Total.
Apartment houses and hotels.....	\$5,432,400	\$4,174,500	\$4,100,500	\$13,707,400
Association and fraternal.....	5,132,000	7,048,000	1,370,000	13,550,000
Bank and office buildings.....	3,570,000	1,194,000	2,380,000	7,144,000
Church buildings.....	5,391,500	3,121,000	3,424,000	11,936,500
City and county projects.....	3,624,000	3,606,000	2,351,000	9,581,000
Dwellings.....	6,097,770	3,541,150	2,958,170	12,597,090
Miscellaneous enterprises.....	25,509,635	21,871,292	19,531,300	66,912,227
Roads, paving and bridges.....	34,165,542	22,288,415	11,438,325	67,892,282
School buildings.....	15,862,250	11,356,050	11,587,400	38,805,700
Sewers, drainage and water works.....	15,284,800	10,099,750	4,033,500	29,418,050
Store buildings.....	3,418,500	2,989,500	1,246,800	7,654,800
Total.....	\$123,488,397	\$91,379,657	\$64,720,995	\$279,589,049
	Contracts Awarded.			
	March.	February.	January.	Total.
Apartment houses and hotels.....	\$3,423,250	\$2,928,050	\$1,453,550	\$7,804,850
Association and fraternal.....	290,550	98,500	1,189,000	1,578,050
Bank and office buildings.....	2,359,000	742,000	1,578,080	4,679,080
Church buildings.....	1,332,000	1,924,000	1,051,000	4,307,000
City and county projects.....	820,500	143,570	483,250	1,447,320
Dwellings.....	1,595,800	958,675	747,800	3,302,275
Miscellaneous enterprises.....	10,404,345	13,871,700	3,545,794	27,821,839
Roads, paving and bridges.....	11,148,078	9,193,658	6,403,585	26,745,321
School buildings.....	5,700,098	3,017,515	3,101,020	11,818,633
Sewers, drainage and water works.....	2,343,515	1,606,606	1,154,300	5,104,421
Store buildings.....	1,200,695	1,289,900	436,600	2,927,095
Total.....	\$40,617,831	\$35,774,174	\$21,143,879	\$97,535,884

On the whole the entire program is well rounded in classification and widespread in territory with construction work of every kind increasing.

RECAPITULATION OF CONTRACTS AWARDED AND TO BE AWARDED.

First Quarter—1922.

Week ended.	Contracts to Be Awarded.	Contracts Awarded.
March 30	\$25,315,455	\$6,825,335
March 23	21,335,200	9,049,205
March 16	23,608,200	12,247,002
March 9	25,704,690	4,674,745
March 2	27,524,852	7,821,544
February 23	25,050,400	8,254,500
February 16	27,651,685	6,843,070
February 9	17,972,050	9,930,494
February 2	20,703,242	10,746,110
January 26	14,320,225	6,162,815
January 19	13,770,570	4,072,720
January 12	15,116,500	6,914,369
January 5	21,513,700	3,993,575
Total	\$279,589,049	\$97,535,884

RECAPITULATION OF CONTRACTS AWARDED AND TO BE AWARDED MARCH, 1922.

March 2	\$27,524,852	\$7,821,544
March 9	25,704,690	4,674,745
March 16	23,608,200	12,247,002
March 23	21,335,200	9,049,205
March 30	25,315,455	6,825,335
Total—March, 1922	\$123,488,397	\$40,617,831
Total—February, 1922	91,379,657	35,774,174
Total—January, 1922	64,720,995	21,143,479
First Quarter—1922	\$279,589,049	\$97,535,884
Total—March, 1921	87,916,333	25,361,577
Total—February, 1921	30,920,254	21,143,479
Total—January, 1921	21,209,800	8,107,757
First Quarter—1921	\$140,046,387	\$54,612,813

SUMMARY FOR WEEK ENDED MARCH 2.

	Contracts to Be Awarded.	Contracts Awarded.
Apartment houses and hotels.....	\$1,205,500	\$516,550
Association and fraternal.....	3,300,000	15,000
Bank and office buildings.....	429,000	140,000
Church buildings.....	520,000	412,000
City and county projects.....	1,175,000	220,000
Dwellings.....	979,000	482,500
Miscellaneous enterprises.....	4,206,500	3,123,235
Roads, paving and bridges.....	5,597,352	980,670
School buildings.....	4,562,000	1,120,574
Sewers, drainage and water works.....	4,551,000	482,820
Store buildings.....	999,500	328,195
Total	\$27,524,852	\$7,821,544

SUMMARY FOR WEEK ENDED MARCH 9.

Apartment houses and hotels.....	\$1,180,600	\$21,000
Association and fraternal.....	370,000	.....
Bank and office buildings.....	117,000	884,000
Church buildings.....	930,000	142,000
City and county projects.....	1,840,000	238,000
Dwellings.....	452,000	184,000
Miscellaneous enterprises.....	3,233,500	730,300
Roads, paving and bridges.....	9,898,090	832,800
School buildings.....	3,533,500	980,300
Sewers, drainage and water works.....	3,478,000	441,845
Store buildings.....	672,000	220,500
Total	\$25,704,690	\$4,674,745

SUMMARY FOR WEEK ENDED MARCH 16.

Apartment houses and hotels.....	\$1,444,000	\$1,242,000
Association and fraternal.....	90,000	.....
Bank and office buildings.....	342,000	700,000
Church buildings.....	665,000	356,000
City and county projects.....	80,000	.....
Dwellings.....	1,354,000	227,000
Miscellaneous enterprises.....	6,515,000	1,217,000
Roads, paving and bridges.....	6,144,500	5,397,078
School buildings.....	2,594,700	1,727,424
Sewers, drainage and water works.....	3,840,000	364,000
Store buildings.....	539,000	354,000
Total	\$23,608,200	\$12,247,002

SUMMARY FOR WEEK ENDED MARCH 23.

Apartment houses and hotels.....	\$897,000	\$998,700
Association and fraternal.....	445,000	32,000
Bank and office buildings.....	1,790,000	315,000
Church buildings.....	945,500	137,000
City and county projects.....	345,000	50,500
Dwellings.....	1,471,500	128,800
Miscellaneous enterprises.....	6,190,550	3,816,100
Roads, paving and bridges.....	3,548,100	2,286,605
School buildings.....	2,757,550	679,500
Sewers, drainage and water works.....	2,247,000	439,000
Store buildings.....	698,000	166,000
Total	\$21,335,200	\$9,049,205

SUMMARY FOR WEEK ENDED MARCH 30.

Apartment houses and hotels.....	\$705,300	\$645,000
Association and fraternal.....	927,000	243,350
Bank and office buildings.....	892,000	320,000
Church buildings.....	2,331,000	285,000
City and county projects.....	184,000	312,000
Dwellings.....	1,841,270	573,500
Miscellaneous enterprises.....	5,364,085	855,210
Roads, paving and bridges.....	8,977,500	1,650,925
School buildings.....	2,414,500	1,192,300
Sewers, drainage and water works.....	1,168,800	615,850
Store buildings.....	510,000	132,000
Total	\$25,315,455	\$6,825,335

Cooperative Marketing Proves Successful in Texas—Wheat Farmers and Wool and Mohair Growers Form Pools.

Austin, Texas, March 29—[Special.]—Pooling Texas products for the purpose of marketing proved so successful last year that the method is to be greatly enlarged upon during the present year, according to plans of the Texas Farm Bureau. G. B. Alvord, secretary, is directing the organizing of a pool of 3,000,000 bushels of wheat in the Panhandle. He says there is lacking only a few thousand bushels to complete the pool, and that the Co-operative Wheat Growers' Marketing Association will be incorporated about April 10. The territory involved in this organization will comprise twenty-one districts of the State, with one director for each district.

The Southwestern Wool and Mohair Growers' Co-operative Association is arranging to form another pool of wool and mohair, according to Boog-Scott, president. The association during its first season sold 1,000,000 pounds of wool from its warehouse at Houston on a strictly co-operative basis at an average price of 21c and 22c. The best grades sold for as high as 28c. Numerous members of the association who sold their wool for more than 20 cents a pound had been offered from 3 to 7 cents a pound by buyers at home. The first advance that these members received from the association in the warehouse receipts represented a larger total than they had been offered for the wool outright at home. It is asserted that Texas raises 60 per cent of the Angora goats in the United States. Texas wool is used a head of all domestic wools in the manufacture of broadcloths, Boog-Scott said.

\$500,000 Power Plant Contracts Awarded.

Hazard, Ky., April 3—[Special.]—All contracts have been awarded for the construction of improvements to the facilities of the Kentucky and West Virginia Power Co. at a cost of approximately \$500,000. At Lothair post office station an additional 12,500 K. V. A. turbine and a 20,000 sq. ft. surface condenser with auxiliaries will be installed, and the outdoor transformer and switching station enlarged. Other improvements include a new ash handling system, additional boiler feed pumps, and forced draft equipment. F. R. Weller, consulting engineer of Washington, D. C., is the engineer. W. F. Ficklen, of Hazard, is district engineer, while N. M. Argabrite, 30 Church St., New York, is vice president and general manager.

Mexico Importing American Mining Machinery.

Monterey, Mex., March 28—[Special.]—Imports of mining machinery to Mexico from the United States show a big increase during the last few weeks over any similar period for several years. Information has been received from Torreon that the Penoles Mining Company is installing six additional furnaces; it is already operating two furnaces of its smelter plant there. The Potosi Mining Company has received machinery and equipment for a new reduction plant which it is building at Santa Eulalia, to have an ultimate capacity of 200 tons a day. In the Guanajuato district also there has been a considerable revival of mining operations recently.

Nitrates, Fertilizers, Food Supply and National Safety Involved in Muscle Shoals Proposition.

GOVERNMENT POLICY ON NITRATES NEEDED—A STRIKING DISCUSSION BY COURTENAY DEKALB OF A VITAL NATIONAL PROBLEM, CALLED FORTH BY THE MUSCLE SHOALS SITUATION.

By COURTENAY DE KALB.

[Mr. Courtenay DeKalb, of New Orleans, a well known engineer and chemist who has given many years to the study of nitrate and fertilizer questions, as well as to world problems, in the course of a remarkably interesting paper read before the Round Table Club of New Orleans on February 12, reviewed many phases of our country's development and our international complications in times past, as bearing on the question of nitrates, which has been brought pre-eminently to the front by the discussion of the Muscle Shoals situation. We regret that the limitations of space make it impossible to follow Mr. DeKalb through his intensely interesting discussion of diplomatic questions connected with the Panama Canal, with Oriental problems, and with the recent war, and how Germany prepared for that war by the development on an enormous scale of the fixation of nitrates from the atmosphere, but how the length of the war came very near upsetting Germany's calculations on the amount of explosives that would be needed. We can only take a few extracts from Mr. DeKalb's exceptional address which has now been printed in pamphlet form. —Editor Manufacturers Record.]

It is a matter of supreme importance—if we are not to take our orders in future from Tokio, from Downing Street, from Unter den Linden—that the public interest awakened in the project of Muscle Shoals shall be utilized, and before it has subsided that some wise and constructive legislation shall be passed concerning it.

Muscle Shoals is a great water power, one of the greatest in the United States, but it is not the only place where we can make nitrate. When we have finally harnessed Muscle Shoals to grind out nitrate we will quite willingly appropriate money to repeat the same thing on the Colorado of the West, on the Missouri, on the Columbia. For I must tell you that the rated capacity of the total primary power at Muscle Shoals, at mean low water, is only about 100,000 horsepower, equivalent to 56,700 tons of ammonia or 46,700 tons of fixed nitrogen. It is only the primary power than can be absolutely depended upon. The secondary power is a variable. The more conservative estimates place it at 300,000 horsepower. Others have ventured to claim even 500,000 horsepower. It is unsafe to expect more than four times the mean-low-water capacity, which, converted into terms of fixed nitrogen means a possible 187,000 tons if the entire maximum energy of the Tennessee river were converted into that vitally needed chemical.

Major D. P. Gaillard, in charge of design, places the ultimate installed capacity of Muscle Shoals at 375,000 horsepower. This reduces the available nitrogen obtained as ammonia to 175,000 tons per annum.

The last war was a test of our need of fixed nitrogen. We actually did not obtain enough from domestic and Chilean sources combined and we had to let our land go hungry. The result of that policy would have been that, with another year of war, you and I would have gone hungry too. Although we have not kept pace with European agriculturists in the use of fertilizer, and get only twelve bushels of wheat per acre, where they average thirty, and ninety bushels of potatoes per acre, against their average of 205, we actually use 177,000 tons of fixed nitrogen in agriculture yearly. In 1918 we reached the peak of nitrogen consumption in the manufacture of military explosives, using for that purpose alone 230,000 tons. This had nothing to do with explosives for construction and mining, which called for some 30,000 tons more. Had we used even the small quantity ordinarily employed in agriculture, so as to have answered effectively the Food Commission's slogan "Food will win the war," we would have required an extra 177,000 tons. The total of these three, which is our tested minimum requirement for the conservation of our national existence, is 437,000 tons per annum. In other words, we would have needed two and a half times as much as we could get by devoting the whole

available power at Muscle Shoals to the production of fixed nitrogen.

It is now proposed by contract to devote about one-seventh of the power at Muscle Shoals to the fixation of nitrogen. Accordingly, in the event of future diplomatic discussions with Japan, or Germany, or any other power, they would make a simple calculation revealing that we needed seventeen and a half times as much nitrogen as we were prepared to produce at Muscle Shoals, and we would have to bow submissively and accept the foreign interpretation of the point at issue. That, of course, would preserve the peace, while we were being sliced to pieces by our smiling international rivals.

* * *

The success of the synthetic plants in Germany was such as to sustain her military operations for four years without contributions from abroad except minor quantities from Sweden. This was achieved in spite of a serious military miscalculation of the amount needed. The German staff figured on the consumption normal to campaigning with intermittent engagements. They had not contemplated establishing a solid wall of defense hundreds of miles in length, with ceaseless bombardment. The original military estimates called for 65,000 tons of fixed nitrogen yearly. The actual consumption, when the armies came to static siege, was 230,000 tons. She started the war with relatively insignificant stocks, if we may believe Walter Eucken, who has published in Germany, "The Nitrogen Supply of the World," having only 50,000 tons of fixed nitrogen on hand in July, 1914. Her available resources consisted of 110,000 tons coming from coke-ovens and gas plants, 12,000 tons from the Knapsack and Trostberg cyanamide plants, and 7000 tons from the Haber-Bosch plant at Oppau. This gave a total of 129,000 tons* of yearly available new stock. German agriculture normally consumed 215,000 tons.

This indicated Germany's confidence in a short decisive campaign. However, she possessed chemical plants that only required modification to adapt them to nitrogen fixation, so that very quickly she had in operation five cyanamide plants with a rated capacity of 75,000 tons and two Haber-Bosch plants, at Oppau and Merseburg, estimated yield 200,000 tons. Evidently some difficulty was experienced with the Haber-Bosch plants, as the actual output was only 105,000 tons yearly. The cyanamid plants also fell slightly below the rating. These, and the coke and gas plants, however, gave her a safe total of 271,000 tons, more than ample for military needs, but leaving a narrow margin for fertilizer. So even German efficiency failed to provide fully for the national requirements at a time of crisis, and impending starvation was a grim fact, notwithstanding her vast resources in potash. A crop that needs nitrogen will not miraculously shift

over to a potash diet, even at the command of the Kaiser.

In view of these German needs and miscalculations it is interesting to compare our own status, not merely as fixed by our present estimated normal and extraordinary demands, but with a forward look toward the inevitable requirements of the future. By-product coking is relatively new in this country. It was old in the European countries before the pioneer by-product battery of twelve Semet-Solvay ovens was erected at Syracuse, New York in 1898. From that small beginning this method of national conservation has expanded slowly, though steadily. By 1903 the total output of coke by this system had reached 7.45 per cent of our total consumption.

With the outbreak of the war stupendous efforts were made to expand the by-product coking industry, in order to recover the available ammonia. By 1919, for the first time in our history more than half the coke in America was made in Semet-Solvay and Koppers ovens. In 1920 the proportion of by-product coke was 58 per cent of the national output. The exact figures are: 21,000,000 tons from 82,000 beehive ovens, and 29,000,000 tons from 10,906 by-product ovens.

It is a startling fact that if every ton of coke made in the United States were to be produced from by-product ovens so that each ton should give us its normal twenty-eight and twenty-nine pounds of ammonium sulphate, and if the whole power of Muscle Shoals were to be used for fixing nitrogen, we would still be without a sufficient quantity to meet our needs in case of war and at the same time maintain unimpaired the present productivity of our soils. Stating the quantities needed in terms of fixed nitrogen only, we normally consume each year about 177,620 tons in fertilizers. We normally import from Chile 560,000 tons of nitrate, which is equivalent to 92,000 tons of fixed nitrogen. We obtain from our by-product coke ovens 93,000 tons of fixed nitrogen per annum. The rated capacity of Muscle Shoals at mean low water would yield 46,700 tons of fixed nitrogen. About 32,500,000 tons of coal are still coked in beehive ovens, which could be made to produce an additional 75,678 tons of fixed nitrogen. Taking the present need for coke in the metallurgical industries as the measure of the total ammonia that could be counted on from this source, the available fixed nitrogen from coal would be 168,700 tons yearly. Adding the amount that could be derived from Muscle Shoals, the grand total of available domestic fixed nitrogen, exclusive of the relatively small amount derived from the output of cyanamide, which is actually made on Canadian territory by the American Cyanamide Company, is approximately 215,400 tons.

Against this potential supply we have a present consumption in agriculture of 177,000 tons of fixed nitrogen, and a war-time requirement, as shown by our recent experience, when only a fraction of our reserves were in action, of 204,000 tons yearly. This gives a total demand for food and powder of 381,700 tons, leaving a deficit of 166,300 tons. Our deficit, considered in the light of immediate resources from by-product coke ovens, is 111,000 tons.

This is not all. The United States will surely not continue importing foodstuffs if the addition of more fertilizer shall double and treble our present agricultural yield. We are one of the most backward countries in the world as regards fertilization. Fairly complete statistics for 1912 showed that Germany then employed, per acre of land, in cultivation, 188 pounds of fertilizer, Great Britain 162 pounds, France 79 pounds, Italy 77 pounds, and the United States 40 pounds. The most intensive fertilization practiced in America is in Florida, where 345 pounds per acre is used; next comes South Carolina with 295 pounds, New Jersey with 256 pounds, Connecticut with 246 pounds, and North Carolina with 244 pounds. These figures correspond to 1919. Georgia with 160 pounds represents about the same consumption as the

average in the more advanced European countries, and therefore may be taken as a fair basis of comparison. If the entire United States were to apply fertilizer per acre of land in cultivation at the same rate, this country would consume an additional 635,700 tons of fixed nitrogen yearly. Unless we do this our food supply will run down in a few years so as to make us largely dependent on foreign countries for the necessities of life.

Fertility is a wasting asset. Jacob G. Lipman, one of the greatest living American agronomists, has computed that our total losses of nitrogen from tilled lands, resulting from drainage into rivers, and from nitrogen removed by crops and either exported in one form or another, or destroyed, and lost in sewage, amounts to not less than 15,000,000 tons of ammonium sulphate or 3,061,000 tons of nitrogen yearly, which would take 33 years to replace each year's loss at our present rate of domestic output of fixed nitrogen.

More intelligent methods of cultivation and an extension of our reform methods of sewage disposal, can minimize many of the losses estimated by Dr. Lipman, but it is evident that the maintenance of our food-supply to meet a growing population and to overcome the impoverishment of our farms, will demand the adoption of the Georgia standard of fertilization, and that will place our total needs for agricultural and military insurance at \$13,400 tons per annum or nearly nine times our existing domestic supply.

Not only do we need to devote the whole power of Muscle Shoals to the production of nitrogen compounds, as the beginning of wise provision for national security and for the preservation of an adequate food-supply, but by every possible means must encouragement be offered to the building of by-product coke ovens until the criminal waste of the beehive oven has become only a painful memory of the crude and thoughtless past.

The great issue now faces us. Congressional authorization of the contract pending before it has nothing to do with the national nitrate problem.

In May, 1920, Senate Bill 3390 was introduced for incorporating a semi-official nitrate corporation. The intention of its sponsors was good, but they could not have done anything that would more have rejoiced the hearts of the German people, just as the acceptance of the pending contract diverting the power of Muscle Shoals to other uses would rejoice them. They do not want us to make fixed nitrogen. Senate Bill 3390 failed because it did not recognize that men already producing fixed nitrogen had a right to protection in an industry that was doing, in its way, just what Muscle Shoals was intended to do for the protection of the American people. A great deal of unnecessary bad blood was stirred by some lack of constructive statesmanship in the Senate. Had that bill been amended so as to protect every source of fixed nitrogen that this country now possesses or may develop in future, no trouble would have arisen, except for the meddling of the friends of Germany.

There are some things so vital in the development of the life of a nation that it is trifling with our future to leave them in the hands of unrestricted and unaided commerce. The nitrogen supply is one of these. It is not socialism, in the evil sense that socialism is advocated by those who seek to overthrow your existing political institutions, to reach out and control so vital a necessity as this Muscle Shoals is only one part of a great national problem. The problem as a whole involves the production of the maximum quantity of fixed nitrogen that can be made by all available means combined. Every one of these must be included in any plan that shall serve as an adequate protection to this republic. A way must be found for ensuring the continuance of production by every enterprise that yields fixed nitrogen, and the prices must be regulated under a broad nitrate statute that will ensure a legitimate profit, with protection against

destructive foreign competition, without limiting the use of such materials in agriculture. If Muscle Shoals, with its spectacular advertising and its appeal to the popular imagination is turned over to general manufacturing enterprises, the rallying point around which to create sentiment leading to a wise national nitrate policy will be lost, and the people will awake ultimately to a realization of the national duty in the face of tragic need. It makes no difference who carries out the plan to harness Muscle Shoals for national service, if it is done in conjunction with such a policy.

In further discussion of the nitrate situation Mr. DeKalb in a letter to the **MANUFACTURERS RECORD** adds the following:

It is possible that a financial and industrial genius like Henry Ford might over-ride the obstacles to success with a plant at Muscle Shoals devoted strictly to the production of fixed nitrogen. It is easy to see, however, that it would be difficult for him to overcome the competition he would meet if he were to attack the problem as a pure act of patriotism unprotected by a broad national nitrate policy, covering the marketing of all the nitrogen compounds that can be produced by the coke ovens, and the gas plants in this country. Moreover, such a policy would necessarily involve protection against destructive competition from Germany with her growing synthetic nitrogen products, and from Chile with her alien-owned deposits, many of which are also German controlled.

If Henry Ford were to try to use Muscle Shoals for fixed nitrogen alone, and were to request a tariff to make that possible, it would be violently opposed on the ground that it would be favoritism to grant it. If, on the other hand, Muscle Shoals is not used exclusively for making nitrogen compounds, in conjunction with encouragement to produce these compounds by every other developed or potential means at our command, national disaster is sure to come. Those who have been closely informed concerning recent international affairs realize that the threatening storm clouds would soon burst upon the country.

The only certain protection to this vital fixed nitrogen industry that can be sustained as competent, and as fair to all concerned, must come through the nationalization of these substances, having control of the market, and so regulating the price as to ensure a profit to all producers, present and prospective. There is no danger of our having too much. We could advantageously use many times more than Muscle Shoals and our by-product coke-plants can provide.

If Henry Ford were to take the initiative in seeking national fixed-nitrogen legislation, accompanied by an offer to use the whole power of Muscle Shoals for fixing nitrogen, he would electrify the American people. They would acclaim him from one end of the country to the other, and would give him almost undivided support. He would stand as the real protector of the people and become their idol. He would be looked upon, not only now, but in the sober judgment of history, as one of the wisest and most constructive men of affairs produced in this epoch.

Without rapidly increasing the amount of our domestic fixed nitrogen the food supply will run down, for we have reached a degree of soil-impoverishment that will otherwise be followed by an accelerating decline in crops.

Without sufficient supplies of nitrogen we could not face a foreign war as a last means of protecting our rights, and that means submission and decadence.

With deficient food, and no domestic means of making powder for our weapons, we must accept the dictation of foreign rivals. The remedy is to nationalize the fixed nitrogen and coal-tar products industries, while there is yet time to prepare for the protection of the nation.

Contract Awarded for Large Sulphur Mining Plant— Extensive Development to Follow at Cost of Several Millions.

Freeport, Tex., April 1.—[Special.]—Immediate development of the large sulphur deposits at Hoskins Mound, just leased from the Texas Company by the Freeport Sulphur Co., of New York and Freeport, will follow the award of the contract to Dwight P. Robinson & Co., Inc., New York and Dallas, for the design and construction of a complete sulphur mining plant to be erected at Hoskins Mound.

The sulphur company has obtained Cloyd M. Chapman, a consulting engineer. The company now operates a large sulphur mining plant at Freeport consisting of four units built in 1913 to 1918 by Westinghouse, Church, Kerr & Co., which has been merged into Dwight P. Robinson & Co., Inc. This plant contains one of the largest installation of oil-burning boilers in the world.

By the terms of the lease the deposit must be developed as soon as the necessary equipment and machinery can be installed. It is said the expenditure will total several million dollars.

Mineral Filler Investigations at Birmingham.

Elutriative tests have been made at the Southern Experimental Station of the Bureau of Mines, Birmingham, Ala., on certain materials, such as silica, tripoli, bentonite, fuller's earth waste, infusorial earth, ocher, slate flour, whiting, talc, pyrophyllite, and mixtures of non-metallic minerals. Microscopic slides have been made for the purpose of counting the grains. An air separator has been devised for the classification of finely ground materials. Oil absorption tests have been made on several ochers, on marble whiting, and on clays under varying degrees of temperature. A color scheme has been prepared for the comparison of clays. It has been shown that the lower grades of graphite can be purified by the Trent process, thus rendering them suitable for lubrication purposes.

An advisory committee, composed of representatives of the industries more especially interested in the investigations being conducted at the Station has been chosen as follows: C. E. Abbott, Tennessee Coal, Iron and R. R. Co., C. E. Bowron, Gulf States Steel Co., W. J. Penhallegon, Republic Iron and Steel Co., J. E. Strong, The Alabama Co., H. J. Thomas, Sloss-Sheffield Steel & Iron Co., and W. M. Lacey, Woodward Iron Co., Woodward, Ala.

\$15,000,000 Bonus for Missouri's Soldiers.

For the purpose of providing a bonus to soldiers of the World War, the state of Missouri voted \$15,000,000 in bonds last year and at a recent sale the entire issue was purchased for \$15,565,500. In explaining the method of payment to the soldiers, the State Auditor, George E. Hackmann, writes to the **MANUFACTURERS RECORD** as follows:

"The bonus is payable in lump sum, cash, on the basis of \$10 for each month and major fraction of a month served. Payments will begin as soon as funds become available from the sale of the bonus bond issue of \$15,000,000, which will be approximately the middle of April, or as soon thereafter as the Bonus Commission can receive and pass upon applications. The law provides that all applications must be filed with the Bonus Commission prior to December 31, 1922."

During the week ended March 25, the War Finance Corporation approved a total of 223 advances, aggregating \$6,171,000 for agricultural and livestock purposes, approximately a third of this amount being apportioned to the South.

World Consumption of Raw Cotton Increasing.

Manchester, England, March 14—[Special.]—Mr. Arno S. Pearce, the General Secretary of the International Federation of Master Cotton Spinners' and Manufacturers' Associations, has published his statistics relating to the consumption of cotton for the half year ending January 31, and the stocks of cotton in spinners hands on February 1, with previous years' figures for comparison. The outstanding feature of the tables is the increased consumption of raw cotton throughout the world, and especially in Great Britain during the past half year compared with the six months ending July 31 last.

In view of the crisis in the cotton industry throughout the world all firms were asked to give the number of spindles stopped and the hours during which they were idle. For England the total number of returns received represents 683 firms owning 51,162,519 spindles, of which 32,204,981 curtailed production during the six months to the extent of 460,518 hours. This stoppage calculated over the whole industry means an entire suspension during 6.039 weeks against 12.92 weeks in the previous half year and 6.04 weeks for the half year terminating 31st January, 1921. An analysis of the returns shows that generally the Egyptian section has been more fully employed than the American section. Thirty nine firms representing 4,598,231 spindles out of the 15,725,198 spindles (187 firms), reported as being entirely on Egyptian cotton, had no curtailment whatever during the six months under review, while amongst the returns of the American section (492 firms) there were only 36 firms with 3,103,380 spindles out of the 35,436,321 spindles reported, which had kept to full working hours.

For France the number of spinning spindles is given as 9,600,000 and in that figure are still included 550,733 spindles completely stopped owing to the ravages of the war. Of the workable spindles 421,007 were completely stopped during the half year and 1,514,760 were partially stopped. The total stoppage of all workable spindles for which returns have been received was 138.05 hours which equals 2.88 weeks

of 48 hours for the whole industry against 6.92 weeks in the previous half year.

In Germany there exist in the whole country 9,400,000 spindles. Returns have been made by the owners of 8,627,998 spindles of which 1,119,366 were on short time during 1,205,305 hours. This stoppage is equal to the suspension of all spindles for 3.25 weeks in the half year as compared with 5.48 weeks in the previous six months. In most other European countries the statistics given show that more machinery has been worked during the past half year than in the previous half year. It is significant that no short time of any kind is reported in India, but in Japan the stoppages through trade depression amounted to 16.52 weeks of 48 hours, against 21.25 weeks in the previous half year.

A striking feature of the returns is that during the past six months the consumption of American cotton in England has been 1,003,772 bales against only 520,393 bales in the six months ended July 31st last. It is also of interest to mention that stocks of American cotton in the hands of spinners in England on February were 181,493 bales as compared with 204,533 bales six months previously. The number of spinning spindles in Great Britain is given as 56,420,078 and returns have been received from the owners of 51,162,519 spindles. These are divided into 39,948,414 mule and 11,214,105 ring spindles. A point of interest is that 15,726,198 spindles are using Egyptian cotton and 360,006 spindles are in course of construction.

Reports Discovery of High Grade Iron Ore.

Durango, Mexico, March 28—[Special.]—While prospecting for minerals in the vicinity of Llano Grande, the southern terminus of the railroad which runs from this city toward the port of Mazatlan, James Lostingworth recently discovered a large deposit of high grade iron ore, which is said to be equal in quantity, as exposed above the surface, to the famous Iron Mountain that rises out of the plain to a height of five hundred feet on the outskirts of Durango. An American syndicate has become interested in the property.

CONSUMPTION OF COTTON FOR HALF-YEAR ENDING JANUARY 31, 1922.
Total Results of All Countries According to Returns Received.
In Actual Bales.

COUNTRIES.	Number of Spinning Spindles as per Returns Received.	American	East Indian	Egyptian	Sundries	Total	Total estimated Number of Spinning Spindles in each country.
EUROPE:							
Great Britain	51,162,519	1,003,772	24,174	152,272	67,246	1,247,464	56,420,078
France	6,787,604	262,225	31,075	22,126	11,056	326,482	9,600,000
Germany	8,627,998	405,896	100,005	19,197	9,807	534,905	9,400,000
Russia	1,100,000	500		500	366,000	367,000	7,100,000*
Italy	4,078,297	236,228	90,607	7,532	1,685	336,052	4,550,000
Czecho-Slovakia	2,824,615	151,956	21,105	3,749	1,685	158,495	3,565,164
Spain	1,805,785	114,071	15,613	4,271	2,658	136,613	1,805,785
Belgium	1,584,601	67,091	51,231	1,975	1,648	121,945	1,584,601
Switzerland	1,511,508	25,420	3,293	12,416	491	41,620	1,550,000
Poland	451,080	31,274	6,746	468	912	39,400	1,185,623
Austria	1,021,792	44,545	13,268	817	516	59,146	1,021,792
Holland	637,484	43,423	12,209		450	56,082	637,484
Sweden	491,416	31,538	902	245	10	32,695	575,897
Portugal	94,262	3,818		169	4,498	8,485	400,000
Finland	238,932	18,426	18	115		18,559	238,932
Denmark	95,844	9,717	131		99	9,947	95,844
Norway	66,724	3,011	154		4	3,169	66,724
Total	82,580,461	2,432,911	370,531	225,852	468,765	3,498,059	99,797,924
ASIA:							
India	5,587,462	28,763	898,573	2,456	15,987	945,779	6,870,804
Japan	4,112,662	334,983	637,160	11,149	36,502	1,019,794	4,483,258
China	1,732,632	71,970	110,314	505	349,468	532,257	2,068,582
Total	11,432,756	435,716	1,646,047	14,110	401,957	2,497,830	13,420,644
AMERICA:							
U. S. America	36,843,000	2,855,000	6,000	82,000	60,000	3,003,000	36,843,000
Canada	975,446	68,102		650		68,752	1,051,112
Mexico (Jan. 15th)	219,802	11,897		121	7,646	19,664	725,000
Brazil *	1,570,000				226,908	226,908	1,570,000
Total	39,608,248	2,934,999	6,000	82,771	294,554	3,318,324	40,189,112
SUNDRIES:							
	94,115			7,000	1,000	8,000	250,000
GRAND TOTAL	133,715,580	5,803,626	2,022,578	329,733	1,166,276	9,322,213	153,657,680

* Estimate in bales of 500 lbs.

† Only 1,100,000 spindles are working.

Contracts Awarded and Contemplated Construction in the South and Southwest.

Among the construction projects costing \$100,000 and over reported in the construction columns of the MANUFACTURERS RECORD during the past week are the following:

W. H. St. Clair, 1217 Lewis St., Charleston, W. Va., is the architect for stores and apartments to be erected by the United Grocery Co. at a cost of about \$150,000. Mr. St. Clair will award the various contracts and supervise the work.

Bids will be requested April 24 for a club and fraternity building to be erected by the Catholic Club Building Association of Memphis, after plans by Regan and Weller, 334 Bank of Commerce Bldg.

Harwood & Moss, of Richmond, Va., have been awarded the contract for a \$164,000 high school building, after plans by C. M. Robinson, Richmond.

L. C. Fallin, Plant City, Fla., has the contract for a three story building, 105 by 105 feet, for the First Baptist Church, after plans by Herbert L. Cain, architect, Richmond, Va.

R. K. Stewart & Son, High Point, N. C., have been awarded the contract for construction of a building for the Commercial National Bank, 50 by 115 feet and 8 stories high. C. C. Hartman, Greensboro, N. C., was the architect. Contracts will be awarded by C. C. Hartman for lighting, plumbing, heating and elevators.

J. E. Beaman, Raleigh, has the contract for the \$316,500 six story office building for the Agriculture Department of North Carolina. It will be 54 by 156 feet of steel frame and concrete, with stone and terra cotta trimmings. H. A. Underwood prepared the plans.

Dothan, Ala., has awarded a contract to the Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa., for a 1000 kilowatt turbo-generator, and material for a complete unit, also stokers for three 300 horse power boilers. The Beason Manufacturing Co., Kansas City, was awarded the contract for furnishing and installing 35,000 feet of 6-inch water mains, hydrants and valves.

The Ludlow Engineers, of Winston-Salem, N. C., are making plans for a hydro-electric development for Dothan, Ala., according to R. W. Lisenby, city clerk, and these will be ready in about six weeks. About a year ago \$750,000 were voted, and a decision is awaited from the Alabama Supreme Court to determine if the bonds are Waterworks or Hydro-Electric.

Robert B. Upjohn, 456 Fourth Avenue, N. Y., is preparing plans for a \$100,000 building for Temple Emanuel, Greensboro, N. C.

The City of Norfolk will receive bids April 11 for a market building to cost \$300,000. It will be 250 by 150 feet, of fireproof construction, after plans by B. F. Mitchell, architect.

Contract has been awarded Fred. Zurn, 126 Wirthman Bldg., Kansas City, Mo., for construction of a number of apartment buildings, costing \$250,000. There will be ten structures 38 by 65 feet, 3-stories high. Plans were prepared by N. Peters, Shawnee, Kan.

George W. Langford Co., Louisville, Ky., has the contract for a four story addition to the Hotel McAllister Co. at a cost of \$150,000. Frank V. Newell, of Chicago, is the architect.

Three high school buildings in Mingo county, West Virginia, will be constructed at a cost of \$160,000. The Burch Construction Co. will erect a \$60,000 building at Chatterbox. V. B. Varney, of Williamson, was awarded the contracts for structures at Burch and Nolans. A \$30,000 building for the First National Bank of Oak Hill, Va., will be erected

by Mankin Lumber Co., of Huntington. Plans for these structures were prepared by L. J. Dean, architect of Huntington.

Exports of Corn and Meat Products Increasing.

Corn went over the top in February, when 19,000,000 bushels were exported, establishing a new high record, states the Department of Commerce. Unusually large shipments of corn have been made during the past two months to Russia, Germany, England, Canada, the Netherlands, European Russia, and Ukrania.

Meat products, principally cured pork and lard, are showing a steady but conservative increase, February exports being about 50 per cent greater than November. The United Kingdom, Germany, Cuba, Belgium, Mexico, France, and the Netherlands have made the largest purchases in recent months.

Europe, with relatively poor harvests last year and a gradual improvement in the standard of living, is concentrating its resources upon the importation of foodstuffs, especially grain and meat products. The outlook is promising for comparatively large purchases, until at least after the next harvest.

The surplus of wheat in the United States in 1921 moved unusually early, most of it being exported from July to October, and the diminished supply in this country has stiffened the domestic market until prices are getting to be equivalent to or above the world level, with a resultant decrease in shipments abroad.

Demand for Florida Farms.

In a recent issue of the Florida Grower, of Tampa, it is noted that the E. A. Strout Farm Agency, a large real estate concern dealing in lands all over the United States, says that one of the striking features of the movement of farm population is the steadily growing demand for farm lands in Florida; that this movement comes from all over the country and puts Florida well forward in the list of states most active as to the number of farms sold. Florida orange groves constitute the greatest attraction for these buyers, but many find stock raising and general produce farms so profitable they abandon their plans for fruit growing. Seventy eight per cent of the buyers come from other states, New York leading.

Retail Food Prices Far Above 1913 Level.

As compared with the average cost in the year 1913, the retail cost of food on March 15, 1922, showed an increase of 51 per cent in Richmond; 46 per cent in Washington, D. C.; 43 per cent in Baltimore; 42 per cent in New York; 39 per cent in Milwaukee; 38 per cent in Manchester; 37 per cent in New Haven; 33 per cent in Newark; and 26 per cent in Denver.

Pecan and Fig Industry Started.

Gloster, Miss., March 24—[Special.]—Two men, Rev. Barry Hall and W. J. Toler, have started the pecan and fig industry here on a large scale. They have just finished putting out 3000 budded pecan trees and the same number of fig trees on a tract of 2000 acres of land which they have named the "Prophet Pecan Grove."

Commercial Secretary Wanted.

E. C. Porter, president of the Dothan, Ala., Chamber of Commerce advises the MANUFACTURERS RECORD that the body wishes to employ a secretary. "He must be an active man and have first hand knowledge of railroad rates," states Mr. Porter.

THE IRON AND STEEL SITUATION

Increasing Demand for Steel Products.

Pittsburgh, April 1—[Special.]—After having allowed the market on bars, shapes and plates to go to 1.35c. or thereabouts, a price altogether too low in relation to cost of production or prices ruling for other steel products, the mills have lately been assiduous in trying to secure higher prices as demand has increased. More than a week ago the market got up to a general basis of 1.40c., and in the past week bars and shapes have become fairly quotable at 1.50c. There has been some business booked in the past few days at slightly less, but only in particularly desirable orders, while on the other hand 1.55c. and even 1.60c. has been obtained on relatively small lots, particularly when the specifications were undesirable. Mills making bars and shapes are endeavoring to obtain 1.50c. likewise for plates, but the plate market level is not so sure, plates being the "weak sister" in the three heavy rolled products.

Instead of endeavoring to work the market up by stages in actual sales, the sheet mills have been following a policy of announcing to customers that on April 1 or shortly thereafter their prices would be advanced \$3 a ton, and this has stimulated buyers to place shipping orders as well as contracts for deliveries over the whole second quarter, in order to avoid paying the advance, which is practically certain to be general. The Steel Corporation has made no advance statement and will probably simply advance its prices without warning when it sees the independents are really getting on the higher level. Prices for about four months past have been 2.25c. on blue annealed, 3.00c. on black, 4.00c. on galvanized and 4.35c. on automobile sheets.

Hoops and hot rolled strips have undergone a general stiffening of \$2 a ton in the past week, being now at 1.90c., base. Cut hoops, however, have been at this level for several weeks.

The \$2.40 price on nails has been rigidly held for more than a month, there having been a temporary weakening for a few days in February to slightly lower prices. Incoming business in nails is very heavy, and business in wire products as a whole is rather satisfactory to the mills. Plain wire is 2.25c. and wire fence 68 per cent discount, in carload lots.

Steel production is again increasing, there having been a gain of at least 2,000,000 tons in the past fortnight in the ingot production rate, which is now 31,000,000 or 32,000,000 tons a year, against about 29,000,000 tons at the end of February and less than 18,000,000 tons in the last week of December. Last fall the rate averaged 23,000,000 tons, so that there is a gain of about 40 per cent.

The coal strike begun to-day is altogether unlikely to affect the steel industry directly, as the mills were forehanded in laying in stocks and there are certain to be fairly large shipments from the Connellsville and other nonunion regions. Some of the mills began stocking coal early in December. There are likely to be some strikes here and there in the Connellsville region, this having been taken account of in the calculations. Consumers are evidently entirely satisfied with their stocks as the coal market grew increasingly dull during March and prices declined. One of the large independent interests in the Connellsville region closed two or three mines a fortnight ago on account of lack of orders.

Some observers believe that indirectly the steel industry will see results from the coal strike through a decline in demand for steel this month on account of buyers having been stocking up in the past month or two, accounting for part of the great increase there has been in steel production. Up to date, however, there is no sign of this, the fact being that in general buying has continued to increase.

Connellsville coke has weakened a trifle, it being possible to pick up odd prompt lots of furnace coke at \$3.25, while

for any regular supply last week's general price of \$3.50 still obtains. Foundry coke remains quotable at \$4.25 to \$4.75 with a slightly better selection available at the \$4.25 price.

Pig iron prices remain quotable at \$19.50 for Bessemer, \$18 for basic and \$19 for foundry, f. o. b. valley furnaces, there having been sales in the past week confirming these prices, while in some quarters it is held that all the \$18 basic is cleaned up and the next sale will be at an advance.

Better Conditions at Birmingham.

Birmingham, Ala., April 3—[Special.]—Strengthening of the pig iron quotations indicates a better condition in the market in this section. Considerable amount of pig iron has been sold for delivery during the second quarter of the year, the step being taken before the \$15 minimum, No. 2 foundry iron disappears. The average quotation for the product now is between \$15.50 and \$16 per ton and there have been some sales at the new price. Local consumers have made provisions for needs for a little period ahead and the melt here has been materially increased. The production is still taking on speed with schedule, tentatively made up, for operation of two more blast furnaces this month and possibly a third. The Tennessee Coal, Iron & Railroad Company is rebuilding rapidly one of its Ensley blast furnaces and is repairing with as little loss of time as possible one of the Bessemer iron-makers. The Sloss-Sheffield Steel & Iron Company will probably blow in one of its North Birmingham furnaces.

Furnace interests in the Birmingham district are not affected much by the coal-mine workers' strike which was started in the bituminous coal fields of the country on the evening of March 31. Some few coal mines in this district employ union miners and these affect the total business but little. Coke supplies are steady and will meet all demands of furnaces as well as foundries and machine shops.

As a result of the advance in pig iron quotations, manufactured products are also advancing, sanitary pipe and fittings, for instance, rising as much as \$3 per ton in some sections of the district. Cast iron pipe production is being increased, the United States Cast Iron Pipe & Foundry Company is increasing output, while the American and National cast iron pipe companies are operating at almost full capacities. General statement as to the cast iron pipe trade is that the regular season is being entered with a number of good orders on the books and many bids out with lettings probable in the near future.

Demand for various shapes in steel is strong with prospects of continuation for a long time to come.

The coal production this week in Alabama will exceed that of any week in nearly two years, non-union mines, which predominate strongly, are working to full capacity and railroad cars are plenty. The coke situation is absolutely safe.

Quotations for pig iron and iron and steel scrap show some slight changes for the week, as follows:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$15.50 to \$16.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$16 to \$16.50; iron of 2.75 to 3.25 per cent silicon, \$16.50 to \$17.00; iron of 3.25 to 3.75 per cent silicon, \$17.00 to \$17.50; iron of 3.75 to 4.25 per cent silicon, \$17.50 to \$18.; charcoal iron, f. o. b. furnaces, \$32.00 to \$35.00.

OLD MATERIAL.

Old steel axles	14.50 to 15.50
Old iron axles	16.50 to 17.00
Old steel rails	11.50 to 12.00
Heavy melting steel	11.50 to 12.00
No. 1 R. R. wrought	11.50 to 12.00
No. 1 cast	14.00 to 15.00
Stove plate	14.00 to 15.00
Old car wheels	14.00 to 14.50
Old tram car wheels	13.00 to 13.50
Machine shop turnings	3.50 to 5.00
Cast iron borings	3.50 to 5.00
Cast iron borings (chem.)	13.40

GOOD ROADS AND STREETS

\$1,500,000 Road Bond Issue Sold.

Mercedes, Texas, April 1—[Special.]—The Hidalgo county road bond issue of \$1,500,000 has been sold to T. L. Arlitt, of Austin, Texas, for par plus accrued interest.

\$2,000,000 Road System for an Arkansas County.

Earle, Ark., April 1—[Special.]—With the completion of the 30-mile stretch of highways for which bids will be asked on April 10, Crittenden county will have an aggregate of 200 miles of improved roads, representing a total expenditure of about \$2,000,000 in the last two years. The new program involves the completion of the roads leading out of this city that were started in 1919, and will cost about \$350,000, bonds having been sold for this purpose recently.

Road Materials Available from Bureau of Public Roads.

More than 5,000,000 board feet of lumber and \$220,000 worth of surplus war material, consisting of steam and gas engines and machine shop equipment, all unused, was recently made available to the various State Highways Departments for road construction. The material is to be distributed by the Bureau of Public Roads, as were large quantities of materials which were helpful to many states in road building last season. Most of the lumber just made available for distribution was intended for the construction of a pier at Charleston, S. C., and is suitable for bridge work. The machinery and equipment are stored as ordnance supplies at the Picatinny Arsenal, Dover, Del.

Testing Cheaper Road Building Materials.

A simple, portable apparatus has been devised for testing gravel to determine its suitability for concrete in road construction and is now in use by the Bureau of Public Roads. It consists of two steel balls arranged so that a piece of gravel can be placed on top of one of the balls and the other ball allowed to fall from different heights and strike the gravel. The height of fall required to break the gravel is an indication of its suitability for withstanding the blows of traffic.

Heretofore more costly material has been used when a suitable gravel was available close at hand. Along the same lines tests are being conducted on concrete made from different materials to determine just how far it is safe to go when the quality of material is doubtful.

Changing Styles in Road Building.

During the last ten years there has been a great change in the type of road suitable for traffic conditions on the main-trunk line highways according to the engineers of the Bureau of Public Roads. In 1910 plain and surface treated macadam were considered among the highest types of paving for country roads and a large percentage of the mileage was of these two types. There was a small mileage of brick and concrete, and a somewhat greater mileage of bituminous macadam, but the plain and treated macadam predominated. How great the change has been is shown by the figures recently issued by the bureau. "On Federal aid roads completed between 1916 and 1920 only 2.9 per cent of the total area paved was plain and treated macadam," says the Bureau report.

"The types that formerly constituted such a small part of the mileage were as follows: Bituminous macadam, 3.1 per cent; bituminous concrete, 6.3 per cent; cement concrete, 19.3 per cent; and brick, 4.1 per cent."

Notes on Good Roads Construction.

Contracts were awarded recently at Greenwood, S. C., for paving costing approximately \$200,000. Case and Cothran, of Atlanta, were awarded the paving contract, and the Greenville Paving Co., were the low bidders for the sidewalk paving. The Tomlinson Engineering Co. acted as consulting engineers.

Burke & Hart, Comanche, Tex., have been awarded the contract for 23 miles of road from the Callahan county line to Coleman, at a cost of about \$250,000, while the McCall-Moore Engineer Co., were low bidders for the drainage work. Burke & Hart also obtained the contract for 6.14 miles of the Brady road at a cost of \$25,250.

Charleston, W. Va., has just let contracts for paving to cost \$190,000 to the Andrews Asphalt Paving Co., of Hamilton, O., to Board & Healey of Charleston, and to G. T. Fogle and Co., of Charleston.

Surveys are being made in Campbell county, Tenn., for roads involving the expenditure of \$356,000, and Jesse L. Rodgers, of LaFollette, is chairman of the highway board.

The Bank of Commerce & Trust Co., of Memphis, Tenn., has purchased \$387,000 road bonds of Jackson county, and with Federal aid approximately \$775,000 will be available.

The Couch Construction Co., Dothan, Ala., has been awarded the contract for seven blocks of re-inforced concrete paving, and in the near future 40 additional blocks will be let. \$120,000 in bonds having been sold to Weil, Roth & Co., Cincinnati, O., to pay for work already ordered.

Birmingham, Ala., has approved additional paving projects involving the expenditure of approximately \$250,000.

F. D. Harvey & Co., of Memphis, Tenn., have been awarded the contract for construction of 30 miles of highway near Ashland, Mississippi, at a cost of \$198,000 including bridge and road work. A total of 14 bids was submitted for the highway which will be of sand-clay construction.

Grant County, Ky., has voted \$250,000 road bonds to complete the 20 miles of Dixie Highway, extending from Covington to the Scott county line.

Bond issues aggregating \$336,000 for Road Districts 2, 4, 5 and 6 of the Pointe Coupee, La., were sold recently.

The \$2,000,000 bonds voted on December 23, 1921, by Jefferson county, Texas, have been sold to a syndicate of seven bond houses, represented by J. T. Bowman, of Austin, and work of constructing an elaborate system of highways will be vigorously pushed.

Okfuskee county, Okla., has just voted a bond issue of \$500,000, and with assured Federal aid almost every town in the county will be connected by hard surfaced roads.

The W. T. Taylor Construction Co., of Wilsonville, Ala., was the low bidder on the state highway from the Tennessee River across Sand Mountain in Marshall county to the Etowah county line, its bid of \$382,993 being the lowest submitted. Thirteen bids were received from contractors from Texas, North Carolina, Indiana, Georgia and Alabama. The road is 18.2 miles long and will be of rolled stone and penetration method, asphalt binder.

The Hatfield Construction Co., Huntington, W. Va., has been awarded contract for construction of the Barbourville-Salt Rock Road in Cabell County, West Va., at a cost of \$147,818. It will be a vitrified block pavement with sand cushion. George L. Pence was awarded the contract for concrete extension on the Long Branch Wayne road at \$6088. John E. Dougher & Sons Co., was awarded the contract for reinforced concrete work on the main Seven Mile road at \$64,024.

LUMBER AND BUILDING MATERIALS

Sales, Production and Shipment of Southern Pine Make New High Record.

New Orleans, La., March 31—[Special.]—New high records in the sales, production and shipment of lumber from 134 subscribing mills of the Southern Pine Association are shown by the report for the week of March 24, just issued. During the week orders were received for a total of 4536 cars containing 96,866,280 feet, or an average order per mill of 722,883 feet compared with the high average figure of 591,745 feet for the preceding week's orders. Shipments showed a corresponding increase totaling 4136 cars of 88,324,280 feet, averaging 659,136 whereas the corresponding week's shipments per mill average 577,563 feet. Production jumped to 77,884,503 feet, although this increase was not of equal proportion to the increase in sales and shipments, the average per mill being 581,228 compared with 554,290 feet for the previous week. At the end of the week the total unfilled car orders was 11,844 feet, giving an average unfilled order per mill of 1,887,527 feet. The increase in "orders on hand" during the week was 3.50 per cent.

The steady increase in the sales, shipment and production of lumber noted recently is clearly attributed to the steady increase in building reported in these columns during the fall of 1921 and the first three months of this year. Many lumber dealers have remained out of the market as long as possible, and now with depleted stocks and a persistent increasing demand for building materials of all kinds they are coming in again and not only ordering but having the lumber shipped as quickly as possible, showing that many of the purchases now being made are for immediate consumption. Some dealers sensed the big building movement this year and placed orders for large stocks last fall, and now have good supplies on hand with more to follow quickly. The recent good weather has stimulated building to a marked degree, and permits are being issued at an astonishing rate for buildings of every kind, but notably for homes erected for individuals, rather than by contractors, builders, etc., for sale, although construction of this character in the aggregate has a large volume.

Shipments during the week ended March 27 were 13.40 per cent above production. Orders were 24.37 per cent above production and 9.67 per cent above shipments. Thus the good statistical position of lumber is at once evident.

The summary report for the week is as follows:

	Cars.	Feet.
Orders on hand beginning of week.....	11,444	244,386,620
Orders received during week.....	4,536	96,866,280
Total.....	15,980	341,252,900
Shipments during week.....	4,136	88,324,280
Orders on hand end of week.....	11,844	252,928,620

Orders Increasing for Southern Pine—Hardwood Also in Demand.

Beaumont, Texas, April 1—[Special.]—Orders for yellow pine during the past week surpassed both production and shipments. This coupled with the fact that stocks at many mill and retail yards are badly broken places the mills in rather a strong position. The demand has not been large from any one particular section, but yards in all sections seem to be buying in small quantities. Each week adds a little more to the orders on hand as the spring building program in other sections of the country goes forward.

Low grades are strong and upper grades steady. Mills are pleased with this feature of the situation for it enables them to balance up their cut with a market for the entire output. The rains of the recent week have been a serious

handicap to shipping kiln dried lumber, though not such as to hamper logging operations seriously.

Demand for hardwood is on the increase, but orders are for the most part for one or two cars only indicating that manufacturing plants are still supplying their immediate wants. Altogether there is a better tone to the market. Floods in the Mississippi valley will undoubtedly cause a further decline in production and this may bring an increased demand in this territory.

In the export trade orders have reverted to timbers. A few weeks ago there was a healthy shipment of lumber to France and Belgium, these countries calling principally for primes, the stock of which is running very low.

Large Saw Mill on Double Shift.

Groveland, Fla., April 1—[Special.]—In order to care for increased demand the J. Ray Arnold Lumber Co. mill, one of the largest saw mills in the state, is operating two shifts of 10 hours each. A large part of the lumber cut is being exported to South America, Cuba, Mexico, Great Britain and Belgium. Just recently the plant established what is declared to be a record breaking production for a single band mill, producing in one shift of 10 hours, 110,000 feet of lumber, and has cut within a month 2,500,000 feet. Urgent orders now in hand insure operation of the mill for a long period on the present basis.

Fort Worth-West Plains Railroad Plan.

The Fort Worth-Plains Railroad organization has been formed at Fort Worth, Texas, with W. M. Massie, of that city, as permanent chairman, and E. S. Shannon, permanent secretary. The object is to build a railroad from Fort Worth to the west plains country and the organization was accomplished after a mass meeting that, it is stated, was attended by 400 delegates from different parts of the country, which the railroad is to provide with transportation facilities. A resolution was unanimously adopted to financially support the project. There is a committee of 56 members, representative of the towns along the contemplated route and from this, Chairman Massie was authorized to name an executive board of nine members, which will name all necessary subcommittees. Mr. Massie is also president of the Fort Worth Chamber of Commerce.

New Railroad Construction in Yucatan.

Mexico City, Mexico, March 22—[Special.]—An extensive program of railroad construction has been adopted by the United Railways of Yucatan. The line from Campeche to Frontera will be extended. The branch line which runs to Valladolid is to be extended to Puerto Morelos, where a deep water port is to be developed by the Federal Government; and another line it to be built from Hunucma to Sisal. One reason for undertaking this construction now is to give employment to as many idle men as possible. Another purpose is to develop forests of valuable timber.

Motor Vehicles Cut Down Railroad Traffic.

The receiver of the Rome & Northern Railroad, H. H. Shackleton, of Rome, Ga., who is also general manager, has been authorized by the court to apply to the Interstate Commission for permission to cease operating the road either temporarily or permanently on account of lack of funds. It is alleged that the construction of improved highways and the increased use of motor vehicles have resulted in decreased traffic on the line, which extends from Rome to Gore, Ga., about 19 miles.

RAILROADS

Norfolk & Western Railway in 1921—Many New Industries Established—Coal Mining Active.

The twenty sixth annual report of the Norfolk & Western Railway, which covers the year 1921, says that the Lenore branch, 18 miles long from Lenore, W. Va., to the coal lands of the United Thacker Coal Company in Mingo County, W. Va., was completed on November 1, the total cost being about \$2,200,000. The coal company has about 26,000 acres leased, and shipments began last August.

The large timber treating plant of the railway at East Radford, Va., was also completed. It has a capacity of 1,000,000 ties annually but it will also be used for treating lumber. The steel retort house is 182 by 64 feet and contains the treating machinery, but there are several other buildings, including one for offices, a superintendent's house and dwellings for employes, besides steel storage tanks and a power plant building with a large chimney 220 feet high.

Among other buildings erected were a machine shop, an oil house and a boiler washing plant at West Roanoke, Va., a 16 stall 115-foot roundhouse at Bristol, Va., a brick and steel oil house at Kenova, W. Va., and ice houses at Pocahontas, Va., and Bluestone, W. Va. A complete water supply plant, including a brick and concrete pumping station of 2,000,000 gallons daily capacity and a 200,000 gallons storage tank, was built at East Radford.

New equipment received during the year included two freight locomotives, 444 all steel flat bottom gondola cars of 200,000 pounds capacity; one all steel hopper car of 240,000 pounds capacity; 300 all steel side dump hopper cars of 100,000 pounds capacity (rebuilt); and some other equipment. The locomotives and the gondola cars, besides a little other equipment were all built at the company's shops in Roanoke, Va.

There were 42½ miles of track laid with 130 pound rails and 142½ miles with 100 pound rails, making the total amount of track now laid with 100 pound rails 1294 miles.

Among the new local industries on the lines of the company are 18 plants manufacturing mineral, metal and other products, 29 manufactories of lumber products, 12 factories producing farm implements and farm products and 13 coal mines. At the end of the year there were 205 companies for producing coal and coke with 329 separate mines, of which 321 were in actual operation. Out of 9731 coke ovens 300 were in blast and of the 17 iron furnaces, only one was in blast.

Prices of fuel coal were substantially reduced, the average for the year being \$3.39 per ton as compared with an average cost in 1920 of \$4.33. The company secured 547,790 tons of its fuel supply from its own mines at an average cost of \$2.92 per ton.

The income statement shows total railway operating revenues, \$80,718,802.15; total railway operating expenses, \$64,346,857.10; net revenue from railway operations, \$16,371,945.05; net railway operating income after taxes, rentals and uncollectible railway revenue, \$14,479,836.30; decrease as compared with 1920, \$2,575,508.51; gross income, \$15,587,342.93; decrease, \$2,349,396.91; net income after deductions, \$10,043,181.21; decrease \$2,453,607.16; income balance to profit and loss after dividends on adjustment preferred stock, \$9,123,489.21; decrease, \$2,453,607.16.

The ratio of expenses to total operating revenues displayed a gratifying decrease, being 79.72 per cent as compared with 95.99 per cent in 1920.

The total balance to credit of profit and loss Dec. 31, 1921, was \$35,524,370.63, an increase of \$534,681.64.

CUT IN RAIL RATES VIA SOUTHERN PORTS. Interstate Commerce Commission Decides for Reduction on Pacific Coast Traffic.

The Interstate Commerce Commission last week vacated its order suspending the proposed reductions in class and commodity rates on traffic from Chicago and related points to the Pacific Coast via South Atlantic and Gulf ports the suspension taking effect April 1. This, it is stated, aims to place those ports on a parity with New York as to railroad rates on freight through to the Pacific Coast ports via the Panama Canal. The new rate schedules were filed to take effect February 15 but were suspended until June 15; now they are permitted to take effect with the beginning of April. The new rates, it is explained, are also proposed as maximum and minimum proportional rates from intermediate points south of Chicago.

Concerning this it is said that in many instances steamship rates from the South Atlantic and Gulf ports to the Pacific Coast are lower than they are from New York and that therefore the through rates rail and water would be lower via the southern ports. Yet, it is also stated that any advantage derived from this fact is offset by the regular and frequent sailings from New York as compared with steamship service from Gulf ports. Besides, it is explained that the Gulf steamship lines intend to make their rates more in harmony with those from North Atlantic ports, because present rates are not profitable.

New Company to Operate Old Road.

The Missouri & North Arkansas Railway Company has been chartered and organized at Little Rock, Ark., to purchase the Missouri & North Arkansas Railroad when it is offered for sale April 10. It was expected to resume operation of the line on April 15, but May 1 is now named as the date for trains to run. The upset price of the road is \$3,000,000, and the new company has \$3,000,000 capital stock. It will assume the old indebtedness which amounts to \$2,062,750. The Interstate Commerce Commission has approved a Government loan of \$3,500,000 on the property. J. S. Rowland, attorney, represented the new company in the incorporation.

The directors of the company are G. M. Fyle, J. C. Grubb, Jr., J. A. Wehmeyer, and A. C. Showalter, all of St. Louis; J. C. Murray, H. J. Armstrong, J. R. Tucker, J. Sam Rowland, John C. Worthington and C. C. Alexander, all of Harrison, Ark. Mr. Fyle represents 29,991 shares of the 30,000 shares of stock and the others one share each. As previously stated the Mercantile Trust Company, of St. Louis, Festus J. Wade, president, is to supervise and regulate disbursements under the Government loan.

\$500,000 for Improvements.

The new owners of the Louisiana & Northwest Railroad will spend immediately \$500,000 to improve the road and its equipment, according to a report from Dallas, Texas, quoting Adam H. Davidson. The line was bought March 8 by C. N. Haskell, chairman of the board of the Middle States Oil Corporation; it runs from McNeil, Ark., via the oil fields around Homer and Haynesville, La., to Chestnut, La., 99 miles. Mr. Haskell's office is at 347 Madison Ave., New York.

The United States Railroad Administration has settled with the Louisville Henderson & St. Louis Railway for the period of Federal control by a payment of \$666,000.

Important Railroad Deal in Texas.

Plans are announced for the acquisition by R. C. Duff of Houston, Tex., and associates of two detached lines of the Missouri, Kansas & Texas Railway System, one of them being the Trinity and Colmesneil road, often referred to as "the Katy's orphan," and the road from Livingston to Weldon, Tex., which intersects the other line at Trinity, Tex. The correct name of the first of these two lines is Trinity & Sabine Railroad and it is 67 miles long running directly westward from Colmesneil to Trinity; the other is the Beaumont & Great Northern Railroad, 50 miles long and running northwesterly from Livingston to Weldon, Tex.

The announcement of the plans was made by Doremus & Co., 44 Broad St., New York, representing the reorganization managers of the Missouri, Kansas & Texas Railway, and it says that these two lines will, on the completion of the reorganization plans, be acquired by a new company to be organized by Mr. Duff and those interested with him and they will operate them.

"The plans of the owners," it is further stated, "include substantial repairs and improvements on the lines which they are acquiring, and contemplate extensions of the Trinity & Sabine from Colmesneil to Jasper, Tex., and of the Beaumont & Great Northern from Weldon to Waco, Tex.

"They also provide for an energetic and sustained effort fully to develop the industrial and agricultural possibilities of the counties intersected by the lines of railroad to be conducted by a special department in the organization, the function of which will be to stimulate settlement and development."

The projected extensions of these roads would seem to indicate that they may eventually become part of the Atchison, Topeka & Santa Fe lines, as the extension of 20 miles from Colmesneil to Jasper would connect with the Santa Fe at the latter point, while the westward extension from Weldon to Waco 100 miles, would make a like connection there. But, according to the announcement, the extensions are not to be made immediately.

Baltimore & Ohio Net Earnings Gain.

The statement of the Baltimore & Ohio Railroad Co. for February shows railway operating revenues of \$15,033,672; increase as compared with the same month of last year, \$868,313; railway operating expenses, \$12,049,949; decrease, \$1,195,280; net revenue from railway operations, \$2,983,723; increase, \$2,063,593; net railway operating income after taxes, rentals and uncollectible railway revenue, \$2,071,125; increase, \$2,009,705.

The total figures for January and February combined show railway operating revenues, \$29,303,132; decrease as compared with the corresponding period of last year, \$2,718,079; railway operating expenses, \$23,845,874; decrease, \$5,348,092; net revenue from railway operations, \$5,457,558; increase, \$2,630,103; net railway operating income after taxes, rentals and uncollectible railway revenue, \$3,594,230; increase, \$2,627,000.

New Equipment.

Pennsylvania Railroad has placed orders for 250 all steel passenger train cars, including 190 passenger cars for through trains, 35 combination passenger and baggage cars, and 25 combination baggage and mail cars. Orders distributed as follows: Pressed Steel Car Co., 75 passenger cars; American Car & Foundry Co., 65 passenger cars; Standard Steel Car Co., 50 passenger cars; Harlan plant of the Bethlehem Shipbuilding Corporation, 35 passenger and baggage cars; Pullman Company, 25 baggage and mail cars. As previously noted the railroad company is building 20 dining cars, also all steel, at its Altoona Shops.

Louisville & Nashville Railroad is reported in the market for 10 locomotives, 6 of them of the mikado type and four of them eight wheeled switchers, besides 500 all steel hopper cars of 55 tons capacity, from 500 to 1000 composite gondola cars of 50 tons capacity and 25 passenger train cars.

Central of Georgia Railway is reported contemplating the purchase of 500 ventilated box cars.

Chesapeake & Ohio Railway is getting prices on passenger train equipment, it is reported, including 30 steel passenger cars, 8 steel combination passenger and baggage cars and 25 steel express cars; also for 6000 freight cars. Orders have been placed for 18,000 tons of rails.

Southern Pacific Lines are in the market for 2000 automobile box cars of 55 tons capacity.

Missouri Kansas & Texas Railway will purchase 30 passenger cars.

Plans to Build Pensacola Line to Muscle Shoals.

John T. Steele, Fidelity Building, Buffalo, N. Y., president of the newly organized Muscle Shoals, Birmingham & Pensacola Railway Co., says in a letter to the MANUFACTURERS RECORD:

"The Gulf, Florida & Alabama Railway has been purchased from the creditors committee and it is contemplated to transfer the road to the new company, associating some large interests in the new enterprise, and completing the property through the Warrior coal fields, passing through Tuscaloosa. The plans are not all completed."

At Pensacola, Florida, where the Gulf terminals of the line are situated, it is stated that G. Stacey Rogers, of New York, is among those who are interested in the plans to take over and complete the road, which is now 142½ miles long from Pensacola to Kimbrough, Ala. When entirely finished it would be about 350 miles long.

MECHANICAL

Semi-Steel Development in Making Grate Bars and Other Work.

President E. L. Thomas of the Thomas Grate Bar Company of Birmingham, Ala., in a letter to the MANUFACTURERS RECORD says:

"The idea of semi-steel is quite old. The text books mention it and speak of some of its valuable qualities, but no one seems to have ever been able to commercialize it. Some six or eight years ago, Mr. Dooley, Superintendent of Motive Power, of the Queen & Crescent Railroad, while discussing Thomas Bars with the writer, said,—'You should make them out of semi-steel, or steel.' We told him they would not be as good as the ones we were making and we were honest in the statement; for, steel and wrought iron have but little value for use as fire irons, as they scale and deteriorate too rapidly,—and we overlooked the blending of the cast with the steel and the ability of the cast to protect the steel as the slag does in wrought iron, which raises the fusing point of wrought iron 200 degrees over steel.

"In May 1916, while doing some laboratory work for us, Professor Demorest, of the Ohio State University, Columbus, Ohio, advised us that we could raise the quality of our product through the use of steel in our cupola, using as much as 20 to 30 per cent in our mixture. We wrote him to draw him out and see what he knew about semi-steel and its working in connection with grate bars and his answer indicated that he was theoretical and not practical in his ideas.

"From time to time, this subject has been mentioned by someone, but we held to our idea of steels being unfitted for fire irons, for we did not know how to manipulate and work them, and no one seemed to be able to give us a workable method for doing it,—nor a practical goal to attain unto. We couldn't find anybody who had ever done it commercially and those who had ever used steel in small quantities ultimately abandoned its use except in restricted lines, which discouraged our starting. Some months ago, however, we were having some trouble with some iron that we were

putting into our bars, and we naturally passed these troubles on to the furnace people, who took care of them financially, detailed one of their men on to the job of locating the cause and suggesting a cure. After this man had been to our plant and had us furnish him samples and he had had analyses made, the writer was in the office of one of the higher officials discussing our problems with him. In the course of the discussion he made this remark,—“You have a good proposition, for you have succeeded with it in spite of the material that you have put into it,—and if you would get the right kind of material in there, you would have, and do, something worth while.” That statement was the inspiration for our semi-steel accomplishments. Immediately the writer asked him what he meant. He replied by saying,—“We have an operation in the steel works, that, if we used the material that you use in connection with, we would get an output of from one to six pieces, but we make a mixture of our own that gives us from forty-five to forty-eight pieces for an output.” While that work was totally different from ours, there was a similarity, and, while he wouldn't tell us what he used, for he didn't dare do so, he told us what other steel people used. Then, for the first time in the writer's business experience, he saw the way open by which he could do something that he had always wanted to do, didn't believe could be done,—for the world had never done it.

“Then, I got busy and wrote several letters north and asked those people to give me the analysis of certain work that they were turning out that was used by the steel people and told them I was interested in it for grate bar purposes. One of them came back with the reply that it was no good for grate bars. The other wrote me a mighty nice letter, giving me just exactly the information that I wanted. I then went to my old friend in the Tennessee Company's organization, who has been my helper and friend all of my grate bar days, and told him of my new experiences, the information and inspiration that I had and discussed my plans with him. He advised me that he had always been interested in what I was trying to do, gave me such information as he had and said he wanted to see the result of my endeavor after I had accomplished it.

“I went to a personal friend in the mechanical department high up in the organization of the American Radiator Company, as I knew they had used a small percentage of steel in their mixture. In discussing it with them, I picked up one good pointer.

“I went to another foundryman in Birmingham who had used 20 per cent of steel in their mixture in making shells for the Government. I made investigations of four other foundries that had tried it and talked with some of the furnace people of others that they knew of that had tried it. I talked with the Nordyke & Marmon Company's man of Indianapolis about the use of it in their mixture for automobile cylinders, and with 25 per cent steel they couldn't finish their cylinders without grinding them, and practically, if not all of the other concerns, had abandoned its use, as all raised some objections to it.

“I got hold of McLain's system and studied that. I made a search and research of all of the text books that I could get on the subject, but none of these ever made a semi-steel and commercialized it, but even McLain will wind up by saying,—“Certain people use 20, 25, or 30 per cent of steel in their mixtures,—as you know he teaches this system, or claims to.

“None of this deterred me in the least, but only made it more to be desired, for if it could be made, we could commercialize it by making it into a commercial commodity. To do this, with the goal before us, that the steel people used a kindred mixture of such great comparative value,—and yet so totally different and made out of different stuff,—the writer sat down and made up a schedule of twelve formulas, with twelve different mixtures of twelve different analyses, the mixtures ranging 20 per cent, 33⅓ per cent and 50 per cent steel. Then we bought a car load of steel, had it analyzed for its chemical content, bought several cars of pig iron with two and three lots in each car of different chemical content, made our mixes theoretically, predicated on an element entirely different from the one McLain and the text books employed and kept all other elements static. We melted each of these in our cupola, put them into our product in places or materials that they could do no harm, analyzed and tested each product that we developed,—and watched with the eye after each heat the furnace of the different castings we made in order to determine what progress we were making. We numbered and preserved these test pieces with their fractures, then had them analyzed, tested by the Pittsburgh Testing Laboratories mechanically, and with the fire or melting test by Professor Demorest, requiring twenty-three determinations for each experiment. We tabulated and

recapitulated all of these figures and selected the one with the best all round physical properties, then made additional formulas, mixes and tests to see if we could produce the same results in another mix and through a different source of procedure than the one we employed, for we ignored McLain's instructions and the instructions of all the text books. Instead, we predicted our procedure, based upon our own ideas and experiences over the past thirty years. We do not see how anybody could succeed by predicated their procedure on McLain's teachings and the text books that are written on this subject, for they will not work with us, for we reduced the element in melting and couldn't utilize more than a limited quantity.

“You can appreciate that we picked up many points from each of these sources and we are still studying, working at, and raising our operations to a higher state of efficiency, for our experiments have taught us that if we exceed the range .03 of one per cent that we have adopted for some of the elements, it makes the castings unfitted for use and of no commercial value otherwise than the poorest of scrap.

“This is the greatest and most pleasing accomplishment of the writer's endeavors,—and had he made no other contribution to the world, he would not have lived in vain, for it will be used hereafter for fire room castings, and, unless we are deceived, we have opened up a field for the making of retorts, drying pans, vats, and kindred castings for the sugar refineries and our great industries that have had trouble in securing equipment of proper quality for the exacting service they require of castings, as we are in the midst of a test now through Professor Demorest to determine the fitness of this mixture for the acids and vapors that the mixture will have to encounter. If these tests develop the fact that we have no troubles, this one line will be a business within itself.

“This new mixture, with its great physical properties from 62 to 100 per cent greater than the best cast iron that can be made, correlates perfectly with the writer's accomplishments heretofore, for we make the grate bars out of this material and raise the physical properties without interfering with the details of the bar and its structure with its steam producing and fuel saving qualities that have given it a national market and sale.

“While we stress the increased steaming that we give to boilers and the fuel that we save in the operation of steam plants, with all that that means in the millions of tons of coal that we are saving and will continue to save down through time, one of the greatest contributions of all of this endeavor that we have made, but is not yet appreciated, recognized or used properly, is the ability through the use of this equipment and our methods to eliminate the cleaning period from the burning of coal with all of its losses, all of its wastes, and all of the wasted labor on the part of the fireman. But these things, and such things, have to come along through a campaign of education, but in addition to feeling a great satisfaction over our accomplishments, and awaiting for time to reward us, the writer is living to see the day when the world acknowledges its appreciation through the purchase and use of our products. The demand grows with the days, weeks, months and years.”

FOREIGN NEEDS

[The MANUFACTURERS RECORD receives many letters from abroad asking for information about American goods, and others, from men who wish to represent American houses. Without assuming any responsibility for these concerns, we publish a summary of the foreign letters of inquiry from week to week.]

Trade Opportunities In West Australia.

C. H. GODDARD & Co., 18 Howard St., Perth, Western Australia.—We are requiring information in regard to a cream beater for a confectionery manufacturer, 60 pounds capacity. We carry all raw materials for bakers, confectioners, pastry cooks, cordial makers and brewers. In regard to the outlook for American goods here: Now that your financiers have taken such steps that the exchange position is not such a dreadful impost on any goods bought in the United States, we can see daylight in the position. There is a feeling in favor of starting a number of industries here. Electric power (alternating current), is cheap. Confectionery and the baking trades are going ahead. Cement works and asbestos ceiling sheets are two of the newest industries. Tanneries are being extended and a large sized woolen mill may be established at Albany. Flour milling is also being extended, this being due to this State slowly becoming a great wheat producer and its nearness to Java, Singapore and India markets. Concessions for oil prospecting have been granted by the Government and a well capitalized company will test favorable areas. Our northwest areas are adapted to sheep- and cattle and a large quantity of American wire for fencing is bought.

Construction Department

EXPLANATORY.

The MANUFACTURERS RECORD seeks to verify and obtain additional information regarding all enterprises reported in its Construction Department, by direct daily correspondence. Further facts of news value are published later from telegraph, mail and representatives' reports. We appreciate having our attention called to errors that may occur.

DAILY BULLETIN.

The Daily Bulletin of the MANUFACTURERS RECORD is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$20.00 per year.

Bridges, Culverts and Viaducts.

Ala., Geneva—Geneva County Comms. Court will build bridges and culverts.

Ala., Mobile—State Highway Comsn., plans expending about \$2,000,000 to build bridge across Mobile Bay.

Ark., Little Rock—Pulaski County, Comms. of Dist. No. 10 plan building bridges and openings from Forest Park to Perry County line, from 12th and Lewis Sts. to Perry County line, etc.

Ark., Mena—Western Construction Co., Box 232, 311 Reigler Bldg., Little Rock, Ark., has contract, at \$165,000, to construct steel bridges and 15 mi. hard-surface road from Mena to Oklahoma line.

Fla., Safety Harbor—State Road Dept., Tallahassee, Fla., plans building bridge.

Fla., St. Petersburg—State Road Dept., Tallahassee, Fla., plans building bridge over Four Mile Bayou.

Ga., Bainbridge—State Highway Dept., Atlanta, Ga., let contracts to build concrete bridge over Flint River; main contract No. 2 to Prater, Houghten & Wood Construction Co., Albany, Ga.; contract No. 3 to Pensacola Ship Building Co., Pensacola; contract No. 1 to Deatur County Comms.; total cost \$234,025.50. W. R. Neel, Highway Engr., Peachtree Bldg., Atlanta. Searcy B. Slack Bridge Engr. (Lately noted bids until Mch. 24.)

La., Alto—Richland Parish let contract to Blodgett Construction Co., Shreveport, La., at \$29,218 for building bridge over Boeuf river; James W. Billingsley, Civil Engr., New Orleans, La. (Lately noted inviting bids.)

Miss., Ellisville—Jones County Board Supvrs. will build 60-ft. span steel bridge; bids until Apr. 11.

Miss., Louisville—Winston County Supvrs., B. M. McCully, Ck. will build bridge over Jones Creek; bids opened. (See Machinery Wanted—Bridge Construction.)

Mo., Bloomfield—State Highway Dept., Jefferson City, Mo., let contract to Vincennes Bridge Co., Vincennes, Ind., at \$25,147.27, to build bridge on State road from Cairo to Poplar Bluff; 120-ft. steel truss span; concrete abutments; 30-ft. and two 40-ft. I beam spans; concrete abutments; Stoddard County, Federal Aid Project No. 118; M. S. Murray, Div. Engr., Sikeston, Mo. (Lately noted.)

Mo., Clinton—State Highway Dept., Jefferson City, Mo., let contract to Carterville Construction Co., Carterville, Mo., at \$21,174.30 to build bridges on State road from Clinton to Osceola; 100-ft. steel truss span; concrete floor; two 20-ft. reinforced concrete slab approach spans; concrete piers and pile bents; Henry County, Federal Aid Project No. 87; S. M. Rudder, Div. Engr., Ilgenfritz Bldg., Sedalia, Mo. (Lately noted to vote Mch. 6.)

Mo., Galena—State Highway Dept., Jefferson City, Mo., let contract to Short & Bramer, Monett, Mo., \$30,022 for building bridge across White River; two 180-ft. steel span; two 60-ft. pony truss approach span, etc.; Stone County, Federal Aid Project, No. 161, Section D. (Lately noted inviting bids.)

Mo., Palmyra—State Highway Dept., Jefferson City, Mo., will build bridge on State road from West Ely westward; 20-ft reinforced concrete slab span; 2 reinforced concrete abutments; cost \$4535.80; Marion County, State Aid Project No. 20.38; bids until Apr. 14; M. J. Harrick, Div. Engr., Howe Bldg., Macon, Mo. (See Machinery Wanted—Bridge Construction.)

Mo., Versailles—Morgan County Court, will build bridge near city; bids until Apr. 10. (See Mch. Wanted—Bridge Construction.)

Okla., Newcastle—State Highway Dept., Oklahoma City, will build 2300 ft. bridge over Canadian River; steel with concrete piers; invite bids soon.

Okla., Oklahoma City—Oklahoma County Comms. let \$30,425 bridge contracts as follows: Kansas City Bridge Co., at \$11,000 for 170-ft. steel bridge; Huntington Bridge Co. for 3 bridges including 95-ft. concrete and 10-ft. concrete; Mark Butter-on Co., for 20-ft. and 10-ft. concrete bridges; H. G. Olsen, for 12-ft. concrete bridge; Killough Bros., for concrete bridge. (Previously noted.)

Okla., Owasso—Tulsa County Comms., Tulsa, Okla., let contract to Pioneer Construction Co., Kansas City, Mo., at \$34,400, to build 345-ft. steel bridge across Bird Creek in Township 20 north.

Okla., Poteau—LeFlore County Comms. let contract to J. S. Terry for building 2 steel bridges over Nigger and over Cache Creeks; cost \$4795.95.

Okla., Sallisaw—State Highway Dept., Oklahoma City, Okla. will build 260-ft. bridge over Illinois river between Vian and Gore in Sequoyah County.

Tex., Colorado—Mitchell County will build 350-ft. concrete viaduct across Colorado river; will invite bids. Address Comms. Court.

Tex., Galveston—Galveston County, E. B. Holman, County Judge, will construct reinforced concrete pile trestle bridge over Dickerson Bayou on State Highway No. 2; thirteen 20-ft. dock girder spans; 650 cu. yds. concrete, etc.; Federal Aid Project No. 252; bids until Apr. 17; C. C. Washington, County Engr. Lately noted. (See Mch. Wanted—Bridge Construction.)

Tex., Houston—City, O. F. Holcombe, Mayor, will vote Apr. 29 on \$250,000 bridge bonds.

Tex., Linden—Cass County, H. D. Nelson, County Judge, plans building 1.59 mi. bridge

and approach over Sulphur River between Bowle and Cass counties; Federal Aid Project No. 268; Hess & Skinner, Engrs., Southwestern Life Bldg., Dallas, Tex.

Tex., Port Arthur—City will invite bids until Apr. 6 on sub-structure and fender piles for Strauss Pascule lift bridge; M. C. Erwin, City Engr. (See Mch. Wanted—Bridge Construction.)

Tex., San Angelo—Tom Green County Comms. plans expending about \$75,000 to build 500-ft. concrete bridge across North Concho River; bids until Apr. 10. (See Mch. Wanted—Bridge Construction.)

Tex., San Antonio—City will construct 2 concrete bridges. Address The Mayor.

W. Va., Mannington—City contemplates building 2 concrete bridges over Buffalo Bridge on Clarksburg and Buffalo Sts.; supersedes iron structures. Address The Mayor.

Canning and Packing Plants.

Fla., Lake Wales—Chase & Co., Sanford, Fla. have 4 acre site, will establish fruit packing plant.

Miss., Gloster—Mays Food Products Co. construct vegetable canning plant.

Mo., Kansas City—Jacob Dold Packing Co., Detroit, Mich. reported to purchase and improve Kaw River plant of Drovers' Packing Co.

S. C., Greenville—Chamber of Commerce, John A. Russell, Pres. interested in establishing cannery.

Va., Rockymount—Franklin County Canning Co., capital \$15,000, inctpd. by N. B. Hutcherson, Pres.; Walter St. Clair, Secy.

Clayworking Plants.

Fla., Orlando—Pottery—Orlando Potteries, N. P. Yowell, Pres. will erect mill building; bids opened May 1; install \$10,000 kiln and pottery machinery; Gamble & Bryan, Engrs., East Liverpool, O. (Lately noted inctpd.)

Ky., Russell—Brick, etc.—Kentucky Refractories Corp., A. J. Ivey, Secy.-Treas., Covington, Ky., has 17 acre site and will establish plant to manufacture from 75,000 to 100,000 clay units daily (brick, fire brick furnace linings, etc.) install modern machinery; cost about \$325,000.

Tex., Houston—Bricks—Model Brick Co., Fritz Aebi, Pres., erect plant; capacity 12,000 brick; construction bids in 60 days. Lately noted. (See Mch. Wanted—Brick Plant Equipment.)

Coal Mines and Coke Ovens.

Ala., Eoline—Moffet Coal Co., W. O. Lewis, Asst. Gen. Mgr., St. Louis, Mo. reported to acquire 2000 acres coal land; preliminary work under way for mining coal, erect miners houses, commissary, etc.; portion of machinery purchased; estimate expenditure of \$100,000 within 6 months. (Supersedes recent item under Eoline, Mo.)

Ky., Breathitt County—D. M. Williams Coal Co., Whitesburg, Ky., capital \$50,000, inctpd. with D. M. Williams, Pres. and others; leased coal lands, will develop.

Ky., Lexington—Happy Coal Co., increased capital from \$100,000 to \$200,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ky., Louisville—Chappell-Shrader Coal Co., 1st. and A Sts., organized with C. B. Chappell, Pres.; J. D. Allen, Secy.; Stuart Chappell, Treas.; A. N. Shrader, Mgr.; mining plans not completed. (Lately noted inceptd., capital \$10,000.)

Ky., Sturgis—Bell Coal & Navigation Co., Wm. Herbert in charge, develop coal lands; erect tipples; installing mining machines, power plant equipment; hoisting, conveying and washing mch.; build miners houses, etc. (See Mch. Wanted—Mining Mch.; Locomotives; Cars; Power Plant Equipment; Tipple Equipment, etc.)

Tenn., Knoxville—White Ash Coal Co., inceptd. by G. H. Rader, A. A. Reynolds and W. R. Pitner.

Va., Splashdam—Virginia Elkhorn Mining Co., capital \$50,000, inceptd. with K. B. Elswick, Pres., Praise, Ky.; A. S. Johnson, Secy.-Treas., Pikeville, Ky.

W. Va., Barrackville—Chesapeake Coal Co., T. H. Johnson, Pres., Bellaire, O. increase daily capacity of plant to 3000 tons.

W. Va., Grant Town—Chesapeake Coal Co., T. H. Johnson, Pres., Bellaire, O. reported to have purchased 2400 acres coal land, will develop.

W. Va., Charleston—Bull Creek Mining Co., increased capital from \$100,000 to \$150,000.

W. Va., Morgantown—Blocky Pittsburgh Coal Co., capital \$100,000, inceptd. by S. F. Elkins, Herbert F. Harker, both Morgantown; W. J. Walker, Uniontown, Pa.

W. Va., Star City—Alliance Coal Co., capital \$50,000, inceptd. by Vincent Bitonti and Frank Trovato, Star City; John Farquharson, Algonquin, W. Va.

Cotton Compresses and Gins.

Ark., Arkadelphia—Arkadelphia Farmers Union Warehouse Co. interested in incorporation of company with \$15,000 capital to establish plant with 4 or 6-stand outfit of modern machinery, runways and warehouse facilities.

Mo., Poplar Bluff—Chamber of Commerce interested in establishing cotton compress.

Cottonseed-Oil Mills.

Tex., Austin—Farmers & Ginners Oil Mill, capital \$200,000, inceptd. by H. Wunderlich, Leigh Ellis, G. C. Quinn.

Tex., Shamrock—Shamrock Cotton Oil Co., capital \$30,000, inceptd. by Frank A. and James R. Bailey, N. L. Carter.

Drainage Systems.

Ark., Newport—Jackson County Comms. of Drainage Dist. No. 9, will construct 3 canals; reclaiming 11,000 acres land; approximate cost \$40,000; bids within 60 days; Bowman Engineering Co., Engr., Arkansas Bank & Trust Bldg. (See Mch. Wanted—Drainage.)

Electric Plants.

Ala., Birmingham—Civitan Club, B. Y. Whitman, Chrmn. considering construction of white way on 5th Ave. from 18th St. to Terminal.

Ala., Florence—City, W. S. Eastep, Mayor; Thomas Hailman, Const. Engr. install electric light plant.

Ark., DeQueen—DeQueen Light & Power Co. will establish light plant.

Ark., Mena—Commonwealth Public Service Co. will install engine to replace burned one.

Fla., Orlando—Orlando Water & Light Co., Donald A. Cheney, Gen. Mgr., reported to erect central power station to cost about

\$1,000,000 adjacent to Orlando; current generated at central plant to be carried by networks of high voltage transmission lines to Central Fla. points including Winter Park, Mainland, Oakland and other towns.

Fla., Pablo Beach—City, A. J. Bussey, Mayor, voted \$38,000 bonds to construct electric power line from South Jacksonville to Pablo Beach. (Lately noted to vote.)

Fla., Windemere—Mrs. Elizabeth Marsh, Orlando, Fla. will install electric plant in connection with erection of \$50,000 hotel; furnish light and power to village. (See Buildings Proposed—Hotels.)

Ga., Dalton—Georgia Railway & Power Co., reported to construct sub-station, double size of present station, being of 3000 K. W., is being built for a 110,000-volt line; cost about \$22,000.

Ga., Oakland City, Sta. Atlanta—Realty Sales Corp., Atlanta, will install electric lights in 100 acre sub-division. (See Land Developments.)

Ky., Lothair, P. O. Hazard—Kentucky & West Va. Power Co., R. E. Breed, Pres. will extend plant; install one additional 12,500 K. V. A. turbine and 20,000 sq. ft. surface condenser with auxiliaries; enlarge outdoor transformer and switching station; install new ash handling system; additional boiler feed pumps and forced draft fan; cost approximately \$500,000; contracts let; F. R. Weller, Engr., 201-3 Mills Bldg., Washington, D. C. (Lately noted under Hazard, Ky.)

La., Houma—City voted \$200,000 bonds for electric light, water and purification plant. Address The Mayor. (Lately noted to vote.)

La., New Orleans—Citizens Light & Power Co., let contract to Harry K. Johnson, 822 Perdido, New Orleans, to construct first unit of power plant; concrete and steel; 3000 H.P.; cost \$360,000. (Lately noted.)

Miss., Utica—City voted bonds to construct electric light plant. Address The Mayor.

Mo., Clinton—Green Light & Power Co., construct power plant nr. Clinton; 3000 K. W.; cost \$150,000; furnish current to surrounding towns.

Mo., Jefferson City—Missouri State Capitol Comsn., reported to install lighting system for grounds of State Capitol building; Egerton Swartwout, Archt., 18 W. 34th St., New York.

N. C., Kinston—City plans installing white way on Queen, Heritage and other streets; place standards at 100 ft. intervalson both sides streets; cost \$10,000; Theodore Stain Back, Chrmn. Chamber of Commerce Comm.

N. C., Midway, P. O. Harrisburg—C. C. Stonestreet, Pres. of Midway Lighting & Improvement Co. will construct electric line through village and surrounding territory; distance of about 4 mi.; power supplied from upper sub-station of Southern Power Co., Kannapolis, N. C.

Okla., Atoka—Public Service Co. construct electric line from Atoka to Wapanucka.

Okla., Shidler—Shidler Light & Power Co. chartered by J. C. Blankenship; construct power line from Pawhuska to Shidler. (Lately noted.)

Okla., Wilburton—City will improve light plant, construct sanitary sewer system and purchase fire fighting equipment; voted \$201,000 bonds. Address The Mayor.

S. C., Laurens—Reedy River Power Co. will construct supplementary power house; brick; capacity 1000 H.P. generator; install modern machinery.

Tex., Cameron—Cameron Water, Power & Light Co. will improve plant; increase ca-

acity; install additional treating plant; cost \$40,000.

Tex., Waco—City Comsn. will install white way on Riverside Drive from Washington and First Sts. extending north to bridge; bids opened.

Va., Alexandria—City will establish white way. Address The Mayor. (Lately noted.)

Va., Danville—City let contracts for installing electric power generating machinery as follows: General Electric Co. for supplying 3000 K. W. turbines, costing \$42,885, and motor generators costing \$3815; Babcock Miller Co., for boilers costing \$18,500 and C. H. Wheeler Co. for condensers, costing \$10,000. (Lately noted.)

W. Va., Elkins—A subsidiary of West Penn Railways Co., West Penn Bldg., Pittsburgh, Pa. reported purchased plant and property of Elkins Power Co.; plans consolidating W. Va. holdings and to extend service through coal fields of Cheat Basin and thence to Elkins; also down north branch of Potomac River to Piedmont; surveys being made.

W. Va., Huntington—City contemplates voting on \$500,000 bonds to install electric lights, sewer system and street improvements; Mat Miser, Commr. Streets and Sewers. (Lately noted.)

Flour, Feed and Meal Mills.

Okla., Ponca City—D. J. Donahue, of Ponca City Milling Co. let contract to Jones-Hettler Engineering Co., Kansas City, Mo., to construct 70,000 bu. grain elevator; 120 ft. high; electrically equipped; will also erect flour mill.

Tex., Waukegan—Keystone Mills, capital \$30,000, inceptd. by B. C. & J. H. Campbell, S. M. Ragland.

Foundry and Machine Plants.

Fla., Jacksonville—Repairing, etc.—Norwalk Southern Sales, Inc., capital \$25,000, inceptd. with P. R. McCrary, Pres.; C. W. Hughes, Treas.-Mgr.

Md., Baltimore—Machinery—Electric Hoist & Derrick Co., 825 Equitable Bldg., capital \$90,000, inceptd. by William H. Price, Jr., Harold Tschudi and Matthew Gault.

Md., Baltimore—Pipeless Furnace—Herbert G. Klefer, Inc., 15 E. Fayette St., chartered by Herbert G. Klefer, William S. Busick and J. Wallace Bryan.

N. C., Newton—Wrench—Mebane Wrench Co., 123 Third St., C. H. Mebane, Jr., Mgr. has plant building under consideration, open bids about May 1; install machines for mfr. of autolocking adjustable wrench; daily capacity 300; bids open. (See Mch. Wanted—Machine Shop Equipment.)

Tenn., Knoxville—Engines, etc.—Iddins Machinery Co., organized with J. S. Sample, Pres.; B. O. Iddins, Secy.-Treas. (Lately noted inceptd., capital \$10,000.)

Tex., Beaumont—Oil Tank Cars, etc.—Petroleum Land Co. of Ohio, L. B. Coppinger, Pres., Sharon, Pa., reported to purchase Beaumont Shipbuilding & Dry Dock Co., including land and equipment of other nearby interests; remodel for steel fabricating plant, to mfr. oil tanks, oil tank cars and all kinds of oil refinery equipment.

Tex., Galveston—Marine Machinery—Vulcan Iron Works, capital \$100,000, inceptd. by Ben Sass, Joseph Bader and William J. Cain.

W. Va., Charleston—Tank Cars—General American Tank Car Corp., Chicago, Ill. increase capital from \$3,500,000 to \$4,000,000.

Gas and Oil Enterprises.

Ark., El Dorado—El Dorado Oil & Pipe Line Co. will rebuild burned plant.

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Ga., Oakland City, Sta. Atlanta—Realty Sales Corp., Atlanta, will install gas and electric lights in 100 acre sub-division. (See Land Development.)

Ky., Owensboro—Kentucky Public Service Co., H. D. Fitch, Dist. Mgr., Frank Box, Local Mgr., will construct water gas system; cost about \$30,000; also construct 8000 ft. of 4 in. pipe for trunk line from plant at Third and Polar Sts. to Fourth and Leitchfield, install district governor; contract let to Stacy Bros. of Cincinnati, O. for repairs on gas holder.

La., Homer—A. C. Lea and H. C. Leete, Shreveport, La. acquired plant of Homer Oil & Refining Co. and will remodel; F. C. McClanahan, Contr.

La., Monroe—Windsor Oil & Gas Co., incptd. with \$60,000 capital stock.

Md., Baltimore—Refiners Export Oil Co., 1516 Munsey Bldg., capital \$100,000, incptd. by Wm. R. Gettler, Joel W. Massie, Geo. S. Jones.

Md., East Brooklyn, P. O. Baltimore—Mexican Petroleum Corp. reported to construct nest of oil tanks at First Ave., Wagners Point; install about 20 55,000 bbl. oil storage tanks.

Okla., Oklahoma City—A. W. Lee Oil Co., capital \$100,000, chartered by A. W. and R. G. Lee.

Okla., Okmulgee—Southland Leasing Co., incptd. by H. B. Smith, W. S. Hagan, Joseph L. Pitchard.

Okla., Okmulgee—Norman Oil Corp., capital \$50,000, chartered by J. G. and F. A. Norman, E. E. Buckholts.

Okla., Sapulpa—Sapulpa Refining Co. will install water softening plant; contract let.

Okla., Tulsa—Tiger Oil Co., capital \$1,000,000, incptd. by Burton Hartley, H. R. McGill, Bert Miller.

Okla., Tulsa—Charles F. Noble, First National Bank Bldg., will erect 3 unit, compression type gasoline plant.

S. C., Charleston—Consolidated Company expend \$40,000 on gas plant; install \$25,000 purifier.

Tex., Beaumont—Ortex Oil Co., capital \$50,000, incptd. with H. M. Higgins, Prest.

Tex., Freeport—Freeport Gas Co., will erect two 55,000 barrel storage tanks at Bryan Mound.

Tex., Houston—Farish-Watts-Collins, capital \$400,000, incptd. by S. P. Farish, E. E. Watts and J. A. Collins.

Tex., Orange—Sandy Creek Oil Co., reorganized with \$100,000 capital; C. F. Learned, Prest., Beaumont, Tex.; Carl McFadden, V. P., Port Arthur, Tex.; T. J. Tapp, Secy., Houston, Tex.

Tex., Wortham—Wortham Development & Fuel Oil Co., capital \$15,000, incptd. by J. W. Simpson, W. C. and C. R. Roberts.

Tex., Yoakum—Live Oak Oil Corp., capital \$100,000, chartered by Dr. W. W. Campbell, A. G. Bulwer, J. B. Harris.

Va., Lynchburg—Texas-Arkansas Petroleum Corp., capital \$25,000, chartered with W. W. Hancock, Prest., Box 592; W. B. Ricketts, Secy.; install oil well machinery. (See Machinery Wanted—Drilling.)

W. Va., Buckannon—Norman Oil & Gas Co., capital \$35,000, incptd. by J. A. Rusmisse, O. B. Beer.

W. Va., Fairmont—Dixie Co., incptd. with C. H. Neill, Prest.; G. G. Smith V. P.; J. D. Alexander, Secy.; mfr. lubrication oil.

W. Va., Grafton—Wealthy Oil & Gas Co., capital \$25,000, incptd. by H. W. Tabias, F. S. Suddarth.

Hydro-Electric Plants.

Ala., Dothan—City plans developing hydro-electric plant; \$750,000 bonds available. Address The Mayor.

Ala., Geneva—Benjamin H. Hardaway, Columbus, Ga. may construct dam and power house on Choctawatchee River; develop 50,000 H. P. for railway.

Ala., Ozark—A. E. Killbrew, Newton, Ala. contemplates hydro-electric development on Choctawatchee River; furnish power to surrounding towns.

Ark., Little Rock—Caddo River Power & Irrigation Co. has preliminary permit to construct dam storage reservoir and power plant on Ouachita River; develop 50,000 H.P.

Ky., Louisville—Louisville Gas & Electric Co. applied to Federal Power Comsn., Washington, D. C. for authority to develop power at Dam No. 41; develop 25,000 H.P.; install equipment capable of generating 75,000 H.P.

Ice and Cold-Storage Plants.

Ark., Conway—Conway Oil & Ice Co., organized with A. G. Kahn, Prest.; P. F. Cleaver, Secy.-Treas.; purchased established plant; contract let for all repairs.

Fla., Pensacola—Southern Utilities Co., E. Garden St., enlarging capacity of ice plant No. 1, increasing output from 200 to 400 blocks.

Md., Baltimore—Service Station—City Ice Ave., let contracts to Harry Fox, to erect two service stations; stucco and wood construction; estimated cost \$15,000. (Lately noted.)

Miss., Durant—W. W. Johnson, Mgr., Tennessee Ice & Cold Storage Co., Jackson, Miss. plans establishing \$20,000 ice plant.

Miss., Philadelphia—W. W. Mitchell, plans erecting ice and cold storage plant, capacity 8 tons, install additional units as needed.

N. C., Murphy—Murphy Ice & Coal Co., J. C. Townson, Mgr. will establish ice and cold storage plant, installing 5 ton ice making machine; construction begun.

Tenn., LaFollette—LaFollette Cream & Produce Co., W. A. Yeager, Mgr. has 50x75-ft. plant; install \$20,000 refrigeration and cold storage plant; Southern Construction & Supply Co., Const. Engr.

Tex., Houston—Burruss & Rogers Ice Co., Washington & Oak Sts., erect \$23,000 ice plant; reinforced concrete construction.

Va., Lynchburg—D. B. Ryland and others interested in establishing ice and cold storage plant.

Va., Roanoke—White Realty Corp., Wm. E. Zieber, Mgr., 304 MacBain Bldg., let contract to Eubank & Caldwell to erect 27x108x25-ft. mill construction building, \$10,000; install \$30,000 ice mch., daily output 60 tons. (Lately noted to increase plants capacity.)

Iron and Steel Plants.

Tex., Houston—Alamo Steel Co., will erect 1-story steel frame building and 1-story frame stucco office building; cost \$15,000.

W. Va., Wheeling—Iron and Steel Products—Whitaker-Glessner Co., rebuilding second half of mill; completed power plant including 829 H.P. boilers, a water softening plant of 27,000 gal. per hr. capacity, re-arrange sheet mills and furnaces, new mill foundations shoes and sheet and repair furnaces are being installed.

Land Development.

Ala., Sheffield—Muscle Shoals Development Co., Charles L. Morgan and Stanton Clark, both of Detroit, purchased 2000 acres; will develop.

Fla., Clewiston—Clewiston Development Co., capital \$100,000, incptd. with A. C. Clewis, Prest.; Henry Hall, Secy.

Fla., Miami—Lawrence Park Co., capital \$300,000, incptd. with W. A. Williams, Prest.; E. P. Grimes, V. P.

Fla., Miami—Sunny Isles Ocean Beach Co., capital \$30,000, incptd. with Harry B. Graces, Prest.; R. E. McDonald, V. P.

Fla., Mount Dora—Town will develop 5 acre park on Lake Dora. Adam Hayelwood, Mayor.

Fla., West Palm Beach—Thomas A. Clarke, Brooklyn, N. Y., purchased 1135 acres on Okeechobee Road; develop for sub-division.

Ga., Atlanta—Fitzhugh Knox Real Estate Co., Fitzhugh Knox, Sr., will develop 65 acre on Cascade Rd. for residential site; construct streets, install water and sewer system, etc.; O. F. Kaufman, Civil Engr.

Ga., Augusta—Warren Heights Co., capital \$100,000, incptd. by Frank H. and Thomas Barret, Jr.

Ga., Oakland City, Sta., Atlanta—Realty Sales Corporation, Atlanta, purchased 100 acre site, develop for sub-division; construct streets, install water and sewer systems, gas and electric lights; invites bids; cost about \$100,000; Smith & Rankins, in charge of construction.

La., Alexandria—C. E. Buckles interested in establishing Greenwood Memorial Park; 100 acre tract.

Miss., Gloster—Rev. Barry Hall and W. J. Toler, develop "Prophet Pecan Grove," a 2000 acre tract; planted 3000 pecan and 3000 fig trees.

Mo., Kansas City—J. C. Nichols Investment Co., purchased 230 acre site on 65th, 71st, Wornall Rd. and Oak St., develop for residential section; expend about \$1,000,000.

Mo., St. Louis—McKelvey Construction Co. has contract for improving Kings highway Park; excavate for streets, sidewalks, curbs and sewers.

N. C., Durham—City, R. W. Rigsby, Mgr. plans development of 100 acre cemetery; E. S. Draper, Landscape Archt., 11 E. 5th St., Charlotte, N. C. (Lately noted.)

N. C., High Point—A. Sherrod, Prest., High Point Insurance & Realty Co., will develop 35 acres on Greensboro Rd. for suburban sub-division; E. S. Draper, Landscape Archt., 11 E. 5th St., Charlotte, N. C.

N. C., Shelby—David A. Beam will develop 700 acre tract for fruit and nut orchard.

Okla., Drumright—City plans for tourist park, install gas, water and light system. Address The Mayor.

S. C. Florence—Dargan—Harlee Co. will develop site for subdivision; install water and sewerage system; has 10,000,000 ft. of timber in Berkley county and will cut lumber for building in sub-division.

S. C. Rock Hill—City will develop new park; construct pavilion and swimming pool, lockers, childrens playground; E. S. Draper, Landscape Archt., 11 E. 5th St., Charlotte, N. C.

Tex., Beaumont—City, Geo. Roark, Mgr. interested in amusement park at Harbor Island; extend about \$50,000 on equipment and amusement devices; erect dance hall, skating rink, swimming pool, etc.

W. Va., Beckley—Lillybrook Land Co., capital \$100,000, incptd. by W. W. Goldsmith, H. M. Kilgore and Ashton File.

W. Va., Gassaway—Gassaway Land Co., J. D. McCoy, Prest., will develop 15 acre town site; approximate cost \$16,000; McClay & Robinson, Engr., Sutton, W. Va. (Lately noted incptd. with \$15,000 capital.)

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Lumber Manufacturing.

Fla., Jacksonville—Manning Lumber Co., capital \$450,000, inceptd. with H. F. Hoffmeyer, Prest.; William H. Harwich, Secy.

Fla., Pensacola—Köhler Seaberg Lumber Co., capital \$10,000, inceptd. by John H. Köhler, Prest.; H. I. Seaberg, Secy.-Treas.

Ga., Macon—James & Kingman Lumber Co., capital \$10,000, inceptd. by W. E. James and W. E. James, Jr., R. H. Kingman.

Ky., Cynthiana—Savage Lumber & Supply Co., capital \$25,000, inceptd. by E. W. Savage, C. E. Whalen and others.

La., Jeanerette—A. S. Alston, New York City, reported to purchase lumber holdings in Acadia, Jefferson Davis and Vermillion Parishes; Mr. Alston also operates Jeanerette Shingle and Lumber Mill.

Md., Baltimore—Rex Lumber Co., 10 E. Lexington St., capital \$150,000, inceptd. by Frederick D. Carozza, William H. Grannis and Clyde H. Wilson.

Miss., Grenada—Gayoso Lumber Co., W. A. Ransom, Prest., Memphis, Tenn erect band mill, daily capacity 60,000 ft.; also build 4 mi. log road into timber tract containing 75,000,000 ft. hardwood stumpage.

S. C., Bonneau—Gibbs Bros., Ruby, S. C., reported to purchase 6,000,000 ft. timber; erect 2 small mills; develop.

S. C., Greenville—Blythe Shoals Lumber Co., capital \$10,000, inceptd. with Howard Caldwell, Prest.-Secy.; James M. Richardson, V.-P. and Treas.

S. C., Greer—Dixie Lumber Co., inceptd. by T. H. Brockman, Ben. T. and L. J. Green.

Tenn., Memphis—Rush Lumber Co., capital \$100,000, inceptd. by Paul Rush, Harry M. Adams and James L. McRea.

S. C., Mount Tabor—W. S. Pendleton, Syracuse, N. C., reported to purchase 2,000,000 ft. timber; move mill from Syracuse.

Va., Bristol—Liberty Lumber & Mfg. Co., R. H. Bradshaw, Prest. increased capital from \$25,000 to \$50,000.

W. Va., Huntington—Peytona Lumber Co. increased capital from \$200,000 to \$700,000.

Metal-Working Plants.

Md., St. Michaels—Door Operator—Cyclo Industries, Inc., Philadelphia, Pa. reported to erect \$40,000 plant, to mfr. electric door operator.

N. C., Wilmington—Household Specialties—Household Specialties Co., capital \$100,000, inceptd. by C. J. Vaughan, A. V. Truman and W. A. Grogan.

S. C., Greenville—Metal Plating—Greenville Plating Co., organized with T. H. Machen and others; establish plant to nickle and copper plate mchy., etc.

S. C., Sumpter—Siphons, etc.—Sumpter Super Siphon Co., inceptd. by Harmon D. Moise, R. B. Belser and I. A. Bryan; mfr. flushing devices and attachments.

W. Va., Charleston—Tire Grinding Machinery—Reliance Machine Co., capital \$25,000, inceptd. by J. E. Staton, Charleston; C. C. Pauley and O. F. Griffith, Olcott, W. Va.

W. Va., Huntington—Wireless Equipment—Electrical Power Equipment Corp., E. C. Brooke, Treas.-Gen. Mgr., 215 10th St., establish plant for mfr. of wireless equipment.

Mining.

Ky., Louisville—Asphalt—Louisville Asphalt Co., increased capital from \$25,000 to \$60,000.

Mo., Annapolis—Lead—Annapolis Lead Co., M. C. Rhodes, Prest. let contract for

erection of concentrating plant or mill and an addition to power house; estimated cost \$450,000; daily output of mill 1000 tons.

Mo., Eldorado Springs—Lead and Zinc—Eldorado Development Co., capital \$300,000; inceptd. with A. B. Stricklett, Prest.; L. T. Dunaway, Secy.; plans building mill and smelter.

Tex., Hoskins Mound—Sulphur—Freeport Sulphur Co., New York and Freeport, Tex., let contract to Dwight P. Robinson & Co., New York-Dallas, to construct complete sulphur mining plant; Cloyd M. Chapman, Consulting Engr.; develop large tract, leased from Texas Co. involving large expenditure.

Miscellaneous Construction.

Ala., Gadsden—Memorial Arches—Crawford Z. Abel Chapter of Rainbow Veterans Div. contemplates erecting 2 hero memorial arches at either end of Rainbow drive; plans submitted to State Highway Comsn.

Fla., Jupiter—Inlet—Jupiter Inlet Dist. of Palm Beach County, will construct inlet cut, approach channel and jetties; bids until April 12; J. C. Wagen, Ch. Engr., Lake Worth, Fla. Lately noted. (See Machinery Wanted—Inlet Construction.)

Fla., Sulphur Springs, P. O. Tampa—Seawall—Hillsborough County Commrs., Charles T. Friend, Chrmn., construct Bayshore Blvd. seawall; bids until April 24. (See Mchy. Wanted—Seawall Construction.)

La., Lake Charles—Waterway Improvements—Calcasieu Parish Police Jury, will deepen and widen Calcasieu-Sabine section of the Intercoastal waterway between the Calcasieu and Sabine rivers to depth of 30 ft., making waterway from Lake Charles, La. to Gulf of Mexico; vote June 13 on \$2,750,000 bonds and with Government appropriations making \$780,000 available. (Lately noted.)

Mo., Kirksville—Heating Plant—Andrew T. Still College of Osteopathy & Supply Co., Dr. Geo. M. Laughlin, Prest. let contract to L. F. Prehlman to construct 3 story and basement 100x100 ft. fireproof building; \$250,000; to Kirkland Plumbing, Heating & Supply Co., at \$13,325 to install heating and ventilating system, including steel boilers, vapor vacuum specialties, feed pumps, ventilators, etc.; Irwin Dunbar, Archt. Super-sedes recent item.)

Tenn., Memphis—Swimming Pool—J. F. Tate and others interested in construction of swimming pool; estimated cost \$25,000.

Tenn., Memphis—Terminals—City, Rowlett Payne, Mayor and Federal Government will construct \$500,000 terminals; let contract to R. W. E. Thompson, Earle, Ark. to build 4 concrete floating docks equipped with steel sheds and electric cranes, 1600 ft. tramway extending into river parallel with the bank, storage yards and sheds provide facilities for loading and unloading freight, etc.

Tex., Karnes City—Tank—City, A. P. Cobb, Mayor will erect elevated steel tank; height 100 ft., capacity 50,000 gals.; bids until April 18; Terrell Bartlett, Engr., Calcasieu Bldg., San Antonio, Tx. (See Mchy. Wanted—Tank.)

Tex., Port Arthur—Canal—City will construct Sabine Naches canal; bids opened about April 6; M. C. Erwin, City Engr. Lately noted, project approved for deepening canal. (See Mchy. Wanted—Canal Construction.)

Va., Norfolk—Dredging—Port Comsn. let contract to Atlantic Gulf & Pacific Co., Park Row Bldg., New York City for dredging and filling 750,000 cu. yds. at Sewells Point, in connection with proposed city terminals; R. E. Steed, City Clk. (Lately noted.)

W. Va., Clarksburg—Ventilating Fan—Baltimore & Ohio R. R., H. A. Lane, Ch. Engr., Baltimore, Md. let contract to Empire Engineering Co., 216 E. Lexington St., Baltimore, at \$50,000 to install electric ventilating fan plant for tunnel.

Miscellaneous Enterprises.

Ala., Birmingham—Decorating—C. C. Evans Paint & Decorating Co., inceptd. by C. C. Evans, O. W. Anderson and B. P. Williams.

Ark., Searcy—Potato Curing House—Searcy Sweet Potato Growers' Assn., L. H. Mercer, Prest., contemplates building potato curing house; construction following Government plans.

D. C., Washington—Construction—American Home Building Co., capital \$100,000, inceptd. by Lucius Gray, W. W. Forte and Elmo L. Perry.

Fla., Gainesville—Laundry—Weaver Steam Laundry Co., capital \$15,000, inceptd. with S. O. Weaver, Prest.; B. P. Beville, Secy.-Treas.

Fla., Miami—Hardware—Hart-Hosea Hardware Co., capital \$50,000, inceptd. with Henry Hamilton Hart, Prest.; Fred W. Hosea, Secy.-Treas.

Fla., Palmetto—Fire Fighting Equipment—City, L. P. Thomas, Mayor install additional fire fighting equipment; vote April 3 on \$7500 bonds.

Fla., Pensacola—Printing—Herbert Printing Co., Chas. Herbert, Prest., enlarge plant and install new facilities.

Ga., Cuthbert—Potato Curing—N. M. Weaver, interested in establishing \$25,000 cold storage plant and potato curing house.

Ky., Louisville—Wood Preserving—Producers Wood Preserving Co., capital \$500,000, inceptd. by Russell Lord, Oscar S. Bond and A. W. Armstrong.

Ky., Owensboro—Printing—Progress Printing Co., increased capital to \$15,000.

Md., Baltimore—Printing—Victory Printing Co., 213 Sharp St., capital \$50,000, inceptd. by L. Edward Wolf, Charles H. MacLellan and James E. Goodwin.

Mo., California—Fire Fighting Equipment—City, purchase additional fire truck; contemplate bond issue. Address The Mayor.

Mo., Kansas City—Fire Alarm System, etc.—Fire Dept., Alex. Henderson, Chief, 1020 Central St., let contract to Mr. Flanagan to erect 2-story 40x75 ft., reinforced concrete fireproof building; install fire alarm telephone and telegraph system; bonds voted. (Lately noted.)

Mo., Lebanon—Fire Fighting Equipment—City, plan installing additional fire fighting apparatus; vote April 18 on \$18,000 bonds. Address The Mayor.

N. C., Charlotte—Motion Pictures—Continental Pictures Corp., 6 S. Graham St., capital \$10,000, chartered with Fred Martin, Secy.

N. C., New Bern—Police Signal System—City, Edward Clark, Mayor let contract to Gamewell Fire Alarm & Telegraph Co. to install police signal system. (Lately noted.)

N. C., North Wilkesboro—Taxi Service—C. & C. Motor & Taxi Service Co., capital \$30,000, inceptd. by T. C. Caudill and others.

N. C., Raleigh—Laundry—North Carolina College of Agriculture & Engineering, Dr. W. C. Reddick, Prest., erect \$20,000 laundry in connection with school building. (See Contracts Awarded—Schools.)

N. C., Salisbury—Printing—Rowan Printing Co., capital \$15,000, inceptd. by S. Holmes and S. S. Plexico; Isabelle M. Earle, Spencer, N. C.

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Okl., Claremore—Radium Baths—Radium Bath House Co., E. J. Hoffman, Prest., Box 877, Tulsa, Okla., has fireproof building, plans building additional 2 stories, install electric and steam equipment, vitrolite or porcelain bath tubs, 50 zinc covered sanitary cots, 2 electric bath cabinets, equip physicians office, etc.; handle 500 radium baths daily; A. C. Davis & Son, Archts., 430 N. Broadway, Shawnee, Okla. (See Machinery Wanted—Electric and Steam Equipment; Tubs (Bath); Bottles (Glass); Cots (Sanitary); Towels (Bath) and Sheets; Bath Cabinets (Electric); Office (Physician) Equipment.)

Okl., Wilburton—Fire Fighting Equipment—City, purchase fire fighting equipment, improve light plant and sanitary sewer system; voted \$201,000 bonds. Address The Mayor.

S. C., Chester—Construction—Carolina Contracting Co., capital \$50,000, inceptd. by P. M. Dietz, C. D. and F. L. Crosby.

S. C., Greenville—Dry Cleaning, etc.—McKeithan's, Inc. (lately noted chartered) organized with C. S. Allen, Secy.; has plant; mfrs. sheets, pillow cases, etc. in connection with cleaning plant; install rug cleaning mchy., and sewing machines; \$10,000. (See Mchy. Wanted—Rug Cleaning Machinery.)

Tenn., Chattanooga—Printing—Andrews Printery, capital \$25,000, inceptd. by E. A. Andrews, W. W. Funk and J. D. Kennedy.

Tenn., Knoxville—Incinerator—City Comsn. have \$75,000 available for construction of incinerator; invite bids within short time. (Previously noted.)

Tenn., Nashville—Fire Fighting Equipment—City let contract to install additional fire engine; \$14,000 available; S. H. McKay, City Clk.

Tenn., Nashville—Steamboat Line—Shippers' Transportation Co., capital \$25,000, inceptd. by R. A. McWhirter, F. W. Horton and R. A. Good.

Tex., El Paso—Printing—Rocky Mountain Bank Note Co., capital \$60,000, inceptd. by W. S. McMaith, Webb G. Seibold and Charles Dennison, Jr.

Tex., Georgetown—Fire Fighting Equipment—City plans purchasing additional fire fighting equipment; voted \$15,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Hereford—Hardware—Dunlap Hardware Co., increased capital from \$7500 to \$40,000.

Va., Fairfax—Construction—Pardoe Gillespie Co., capital \$50,000, inceptd. with Charles H. Pardoe, Prest., Washington, D. C.; Francis G. Gillespie, Secy., Fairfax.

Va., Newport News—Preservatives—Southern Service Co., capital \$25,000 inceptd. with C. W. Wallace, Prest.; Bruce McIntyre, Secy.; preserving surfaces against decay, etc.

Va., Roanoke—Fire Fighting Equipment—City, W. W. Boxley, Mayor, install additional fire fighting equipment; voted \$60,000 bonds; W. P. Hunter, City Mgr. (Lately noted to vote.)

Va., Wytheville—Laundry—E. A. Patterson and N. R. Rector, plans erecting steam laundry on 4th. Ave.

Miscellaneous Factories.

Ala., Birmingham—Chemicals—Dixie Chemical Products Corp., D. H. Markstein, Prest., plans additional factory building.

Ala., Montgomery—Shirts—Rellance Mfg. Co. of Chicago, will establish shirt factory at Kilby State Prison, in connection with proposed 10,000 spindle cotton mill; signed contract with State for entire output of mill. (See Textile Mills.)

Ark., Fort Smith—Safety Pocket Trousers—

Avron Wein interested in organizing company with \$50,000 to manufacture Safety Pocket trousers.

Ark., Pine Bluff—Candy—Blue Ribbon Mfg. Co., J. B. Bolin, Prest., is installing candy plant at 307 E. 3rd Ave.

D. C., Washington—Confectionery—Columbia Confection Co., capital \$10,000 inceptd. by Clinton L. Marshall, Walter A. Johnson, Wm. F. Garrity.

Fla., Jacksonville—Chemicals—National Remedy Co., capital \$250,000 inceptd. with Giles L. Wilson, Prest., Sam T. Hodges, Secy. and Treas.

Fla., Jacksonville—Glass, etc.—Florida Glass & Novelty Works, capital \$20,000, inceptd. with C. E. Harris, Prest.; Charles A. Powers, V.-P.; Harry W. Herwig, Secy. and Treas.

Fla., Miami—Fertilizer and Insecticides—American Supply Co., inceptd. with Fred C. Gomer, Prest., Miami; Charles R. Graham, V.-P., Goulds, Fla.; W. K. Walton, Secy., Homestead, Fla.

Fla., Miami—Cocoanut Syrup—Miami Cocoanut Syrup Co., 1444 N. Market Ave., capital \$10,000, inceptd. with H. L. Perkins, Prest.; R. J. Forest, V.-P., Winnipeg, Can.; C. C. Ansley, Secy.; has plant.

Ga., Macon—Drugs—Bayne-Martin Drug Co., capital \$15,000, inceptd. by S. E. Bayne, F. R. Martin, Jr., W. K. Dunklin.

Ky., Elizabethtown—Hagan Crume Co., capital \$10,000, inceptd. by E. L. Hagan, C. L. Crume, M. E. Lee.

Ky., Louisville—Tobacco—W. S. Matthews & Sons, 1118 W. Main St. leased building and will equip for tobacco rehandling plant, lately noted burned at loss of \$130,000.

Md., Baltimore—Lamps—United Lamp Co., 108 W. Baltimore St., Samuel Tissenbaum, Prest. has plant to mfr. incandescent electric lamps.

Md., Baltimore—Clothing—Baltimore Coat Front Co., 253 N. Exeter St., inceptd. by Max Greenstein, Louis Goodfriend, Joseph Welner.

Md., Baltimore—Sugar—Cuban Dominican Sugar Co., 101 E. Fayette St., inceptd. by Joseph W. Murphy, Frank J. Horan and James B. Guaragha.

Miss., Biloxi—Creamery—Biloxi Chamber of Commerce interested in establishing creamery.

Miss., Laurel—Rosin—Finkbine Lumber Co., will erect rosin plant; 100,000 board ft. daily capacity; William H. Mason, Laurel, Miss., will install extraction process whereby turpentine, pine oil and rosin are recovered from yellow lumber.

Miss., Vicksburg—Ice Cream—Halpin Markets, inceptd. by Mrs. Ollie Halpin, Mrs. Katie Calvin and Som Romano.

Mo., Jefferson City—Strawboard—Strawboard Mfg. Co. will erect plant.

Mo., St. Louis—Tobacco—John Weisert Tobacco Co., 1120 6th St. John Weisert, Prest. will erect plant; 5 story; 63x90 ft.; fireproof; cost \$45,000; H. O. Hirsch Constr. Co., Contr., Walnwright Bldg., Edw. Lantz, Archt., Post Dispatch Bldg. (Lately noted.)

N. C., Reidsville—Nu Shine—American Products Corp., B. R. Stone, Mgr. (Lately noted increasing capital to \$500,000) has plant with daily capacity of 500 gross, 3½ oz. bottles Nu Shine; will install 50 to 60 gal. capacity steel steam jackets kettles, 300 to 500 gal. capacity tanks and agitators, filling, corking and labeling machines, conveyors and other small equipment. (See Mchy. Wanted—Bottling Equipment; Kettles, Tanks and Agitators.)

Okl., Tulsa—Bottling—Tulsa Bottling Co., capital \$25,000, inceptd. by L. A. Hurst, W. A. Goodner, Young O. Mitchell.

S. C., Charleston—Bottling—Walterboro Bludwine Bottling Co., inceptd. with \$10,000 capital.

S. C., Chester—Ice Cream—Gastonia Ice Cream Co., Gastonia, N. C. will establish branch ice cream plant.

S. C., Greenville—Bottling—Coca Cola Bottling Co., Chas. H. Yates, Mgr. let contract to T. H. Cromer to erect plant on S. Main St.; brick and concrete; 2 story; 40x90 ft.; cost \$12,000.

Tenn., Chattanooga—Boxes—O. B. Andrews Co., consolidation of O. B. Andrews Co. and O. B. Andrews Paper Mills Co.; increased capital from \$500,000 to \$1,150,000.

Tenn., Knoxville—Chemical—Kinney Chemical Co., F. L. Kinney, Propr., 727 Broadway; erect factory; brick; 2 stories; 25x150 ft.; 7000 sq. ft. floor space.

Tenn., Memphis—Chemicals—Oriental Laboratories, capital \$5000, inceptd. by W. H. Steadman, C. L. Gibbs, W. H. Daniel.

Tex., Abilene—Drugs—Compton Drug Co., capital \$75,000, inceptd. by R. B. Compton, Lester Ellis, O. Randolph.

Tex., Dallas—Confectionery Supplies—H. Kohnstamm & Co., capital \$25,000, inceptd. by Joseph Kohnstamm, M. H. Goldsmith, W. B. Garrett.

Tex., Dallas—Waxed Paper—Trinity Wax Paper Co., R. G. Smythe, Mgr., 3008 Williams St. has plant; daily output 4 tons of printed and plain wax paper; will install wax machines, printing presses, trimmers, slitters, winders, etc.; lately noted. (See Mchy. Wanted—Paper Plant Equipment.)

Tex., Fort Worth—Bread—Walker Bread Co., capital \$175,000, inceptd. by H. C. Walker, J. H. and L. H. Wright.

Tex., Houston—Baking—Stude Baking Co., increased capital from \$10,000 to \$30,400.

Tex., Three Rivers—Glass—Three Rivers Glass Co., (lately noted inceptd.) organized with James Kepp, Prest., A. H. Morton, V. P.; Chas. R. Tips, Secy and Treas, all of San Antonio, Tex.; H. S. Warlick, Mgr., Three Rivers; will establish glass plant, 190x48 ft., ordinary construction; daily capacity from 100 to 300 gross milk and soda bottles; will probably build through local contractors; install complete automatic feeder with air compressor, etc. (See Mchy. glass blowing machinery, including automatic Wanted—Automatic Glass Blowing Mchy.)

Va., Graham—Mattress, etc.—C. F. Edwards, Huntington, W. Va., reported to establish mattress and pillow factory.

Va., North Tazewell—Soft Drinks—Tazewell Mfg. Co. let contract to Austin Co., Phila., Pa. to construct plant.

Va., Waverly—Peanut Products—National Peanuts Product Products Co., C. E. Reick, Waverly, has under construction 2 story, 30 x 50 ft. mill buildings; daily output 5,000 lbs. peanut butter, 1000 lbs. salted peanuts, 1750 lbs. peanut candy; will install peanut roaster, blancher, peanut butter mill, candy making and peanut cleaning machinery; all machinery purchased except peanut butter mill. (See Machinery Wanted—Peanut Butter Mill.)

W. Va., Huntington—Shoes—Weller Shoe Co., capital \$50,000, inceptd. by H. C. Weller, J. A. Chambers.

W. Va., Nitro—Luigi Lemma, Montgomery, Ala. will install ice cream plant.

W. Va., Nitro—Paper—Hartje Bros. Paper Co., Charles G. Hartje, have building; will install paper plant.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Motor Cars, Garages, Tires, Etc.

Fla., Miami—Garage—Skyward Storage Co., capital \$100,000 inctpd. with J. W. Williams, Prest.; T. Earl Moore, Secy.

Fla., W. Palm Beach—Garage—Bob's Garage, capital \$20,000, inctpd. by S. P. Hadley, L. R. Baker and R. F. Griffith.

Ga., La Grange—Automobile Parts—Fincher-Traylor Co., capital \$30,000, inctpd. by J. E. Dunson, H. C. Fincher and J. E. Traylor.

Ky., Ashland—Garage—Wurts Brothers, 17th. St., purchased site, erect 50x92 ft. garage building; estimated cost \$25,000.

Ky., Ft. Thomas—Garage—Highland Auto Garage Co., increased capital to \$100,000.

Ky., Louisville—Garage, etc.—Nash Motor Car Co., purchased site, erect garage, main building 35x60-ft. concrete construction; office 14x20-ft. and 40x35-ft. storage house; C. G. Evans, Engr.

Ky., Louisville—Automobiles—Barnett Co., Auto Parts Co., capital \$10,000, inctpd. by William Q. Hall, John L. and Pauline Saylor.

Ky., Louisville—Automobile Parts—Saylor Car Co., increased capital to \$25,000.

Ky., Louisville—Automobiles—Universal capital \$15,000, inctpd. by Herman M. Barnett, R. E. Montgomery and W. R. Cobb.

Ky., Louisville—Garage—Jacob Levy, 949 S. 3rd. St., erect 10,000 garage.

Md., Baltimore—Motors, etc.—Clyclemotor Corp., 101 E. Fayette St., chartered by James Carey, III, John S. Short and Evan D. Lleyelyn.

Md., Baltimore—Garage—John & Rose Lample, 13 N. Fremont Ave., erect 64-ft. 4-in. x 57-ft. garage.

Miss., Hattiesburg—Filling Station—Hattiesburg Vulcanizing Co. will occupy filling station, to be erected by S. J. Ferguson, New Augusta, Miss.; C. Brewer, Contr., New Orleans, La.

Miss., Hazlehurst—Automobiles—Wise Motor Co., Philip Grice, Mgr., let contract to build auto sales room.

Miss., Meridian—Automobile Accessories—Wm. Gilmore Auto & Machine Co., 2116 6th St. (lately noted to erect garage) let contract to Witmore & Priester to build 1 story 65x75-ft. building, \$50,000; install cylinder grinding machine, engine lathe, drill presses, etc.; \$60,000. (See Mch. Wanted—Garage Equipment.)

Miss., Meridian—Filling Station—Star Service Co., 203 22nd Ave., will erect 65x75-ft. building, \$10,000; bids open in about 30 days; install 2 filling stations, pumps, tanks, etc. Lately noted. (See Mch. Wanted—Pumps, Tanks.)

S. C., Sumter—Motor—H. C. Bland Motor Co., capital \$10,000, inctpd. with H. C. Bland, Prest.-Treas.; W. M. LeLorme, Secy.

Tenn., Chattanooga—Automobile—Hol-Em-Tite Auto Seat Co., inctpd. by C. F. Hood, S. A. Gray and J. S. Fletcher.

Tenn., Crossville—Garage—G. E. Harrison, will erect 50x90-ft. garage, brick and concrete construction; install gas tanks. (See Mch. Wanted—Building Materials; Tanks (Gas).)

Tenn., Chattanooga—Motors—J. R. White Motor Co., capital \$50,000, inctpd. with J. R. White, Prest.

Tenn., Memphis—Automobiles—Abernathy Palmer Co., capital \$30,000, inctpd. by George M. Abernathy, E. C. Palmer and W. P. Biggs.

Tenn., Memphis—Garage, etc.—P. P. Williams, 193 S. Pauline St., erect addition, brick exterior, steel truss construction, steel sash and concrete floors; estimated cost \$25,000; building occupied by White Co., Cleveland, O.

Tex., Fort Worth—Automobiles—Hubb Diggs Co., capital \$208,000, inctpd. by Hubb Diggs, R. E. Winger and Mrs. Lloyd Whitney.

Tex., Houston—Tires—Keystone Tire Co., 113 Main St., organized with M. Arila, Prest., R. W. Plummer, Secy.-Treas. (Lately noted inctpd., capital \$10,000.)

Tex., Mexia—Tires, etc.—Mexia Battery & Tire Co., capital \$100,000, inctpd. by J. W. Mayme A. and Annie E. Prickett.

Tex., Orange—Automobile Supplies—H. M. Grayson and H. J. Rose, purchased 150x 200-ft. site, erect building of concrete and iron construction; automobile supplies.

Tex., San Antonio—Garage—Ransom & Silsbee let contract to H. N. Jones Construction Co. to erect garage building on Ave. D. and 6th St.; brick and concrete construction; estimated cost \$11,000.

Tex., Waco—Filling Station—Allen Porter Auto Supply Co. acquired 100x165 ft. building, remodel and install filling station.

Tex., Waco—Filling Station—Allen-Porter Auto Supply Co. purchased 100x185-ft. building on Washington St.; remodel for filling station.

Va., Norfolk—Automobile Parts—Instant Collapsible Rim Corp., capital \$750,000 inctpd. with William E. Thomas, Prest., D. M. Cheatham, Secy.

Va., Winchester—Garage, etc.—Hicks Distributing Co., capital \$50,000 inctpd. with W. I. Hicks, Prest.; H. C. Browne, Secy.

Railways.

Fla., Orlando—J. F. Ange and Frank J. Ryan, of Orlando, are reported as announcing a corporation to have altogether \$10,000,000 capitalization for building an electric railway from Plant City to Sanford, headquarters to be at Orlando. Lines to Tavares and Daytona are also contemplated.

Okl., Clinton—The proposed Clinton-Taloga Short Line is to be 42 mi. long from Clinton via Putnam to Taloga, Okla., and is to be built on the company's force account by local capital. Paul R. Riley, of Clinton, is president and general manager, and G. C. Wheeler, also of Clinton, is treasurer. John Owens is chief engineer. Date for construction bids not yet set. Others interested are E. A. Humphrey, V.-P. and L. E. Coleman, Secy. Route is through rolling to level country.

Tenn., Morristown—Southern Railway Co., it is reported, will build about 1½ mi. of second track from Morristown to New Line. T. H. Gatlin, Washington, D. C., is Ch. Engr. of Constr.

Tex., Trinity—R. C. Duff, of Houston, Tex., and associates will acquire the Trinity & Sabine Railroad and the Beaumont & Great Northern Railroad, and contemplate extensions respectively thus: Colmesneil to Jasper, Tex., 20 mi.; Weldon to Waco, Tex., 100 mi. These roads now in the Missouri, Kansas & Texas Railway System.

Tex., Wichita Falls—Wichita Falls & Oklahoma Railway Co. has asked the Interstate Commerce Commission for authority to extend from the end of line to Waurika, Okla., 7½ mi. and also to build a branch to Byers, Tex., about 5½ mi. F. E. Clarity is V.-P. and Gen. Mgr., Fort Worth, Tex., Colorado & Southern Lines.

W. Va., Grafton—Baltimore & Ohio Railroad will build second track from Webster to Brydon, about 2¼ mi. Empire Engineering Co., of Baltimore, has contract.

Road and Street Construction.

Ala., Birmingham—Jefferson County Board of Revenue plans expending about \$100,000

to pave Clay-Chalkville road from Roebuck Springs; Claude Rogers, County Engr.

Ala., Birmingham—Jefferson County Board of Revenue will surface 7 mi. Lock 17 road; 14,000 cu. yds., chert, gravel or shale surfacing; bids until Apr. 21; C. J. Rogers, County Highway Engr. Lately noted. (See Mch. Wanted—Road Construction.)

Ala., Birmingham—City Comen., will expend \$123,425 to improve streets; pave 2nd Ave. through to Tuscaloosa, cost \$73,575; 24th St. from 7th Ave. to 24th St. railroad crossing, asphalt over 5 in. concrete base, cost \$5275; 8th Ave. from 4th St. to west line Owenton survey; sheet asphalt with 50-ft. roadway extending over concrete base, cost \$44,575.

Ala., Brewton—State Highway Comen., Montgomery, Ala., let contract to J. N. Gillis & Sons, for constructing 20 mi. road from Brewton to Sardis Church, in Escambia County.

Ala., Clayton—Barbour County Board of Revenue plans expending \$300,000 to construct roads.

Ala., Cullman—State Highway Dept., Jefferson City, Mo. let contract to Texas Road Co., Dallas, Tex. for constructing 8.2 mi. Bee line highway from end pike on Corn road to Morgan county line. (Lately noted inviting bids.)

Ala., Dothan—City. R. W. Lisenby, Clk., plans paving 40 additional blocks; Robt. L. Totten, Consit. Engr., Birmingham, Ala.; sold \$120,000 bonds.

Ala., Eufaula—City plans paving sidewalks on Randolph, Broad, Eufaula and Barbour Sts.; also pave Sanford and Colby Sts. Address The Mayor.

Ala., Geneva—Geneva County Comms. Court let contract to J. L. Griffin and Lee Lamons, Hartford, Ala. for constructing graded road from Hartford to State line near Estro, Fla.; 101½ mi.; sand clay construction. (Lately noted.)

Ala., Guntersville—State Highway Dept., Montgomery, Ala., let contract to W. T. Taylor Construction Co., Wilsonville, Ala., at \$382,993.28 for constructing 18.2 mi. State and Federal Aid Highway from Tennessee river at Guntersville to Etowah County line; rolled stone 4 in. deep; penetration method. (Lately noted inviting bids.)

Ala., Rockford—State Highway Comen., Montgomery, Ala., will construct 14.5 mi. road from Goodwater to Kellyton and part of road between Goodwater and Ashland and Goodwater and Sylacauga; Coosa County; 135,000 sq. yds. bituminous macadam; bids until May 2; W. S. Keller, State Highway Engr. (See Mch. Wanted—Road Construction.)

Ark., Eldorado—City formed 8 improvement districts; plans paving 43,000 ft. hard-surface paving. Address The Mayor.

Ark., Little Rock—Pulaski County Comms. of District No. 10, C. E. Moyer, Judge, approved expending \$1,929,389 to construct trunk line roads on Fort Smith, Pine Bluff, Perryville and Bauchau roads, and 12th pike.

Ark., Little Rock—Pulaski County, Comms. of District No. 10 plans constructing hard-surface road to Pine Bluff, Palmar, to connect with Road to Conway, paving of Prospect Ave., etc.

Ark., Marion—Crittenden County Comms. Road Dist. No. 6 will complete 30 mi. hard-surface roads; sold \$35,000 bonds.

Ark., Mena—Western Construction Co., Box 232, 311 Reigler Bldg., Little Rock, Ark., has contract, at \$165,000 to construct 15 mi. hard-surface road and steel bridges from Mena to Oklahoma line.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ark., Norrilton—Board of Comms. will expend about \$90,000 to construct highway up Petit Jean Mountain.

Ark., Pine Bluff—City let contract to Kellher Construction Co., Little Rock, Ark., at \$94,387 for paving 36 blocks in Linden St. Paving Dist. No. 52; 6-in. reinforced concrete with curbs, gutters and storm sewers, 22½ and 30-ft. wide; Fred Bennett, City Engr. (Lately noted inviting bids.)

Fla., Barstow—State Highway Dept., Austin, Tex., will construct 12.5 mi. State Highway No. 1; Ward County, Federal Aid Project No. 263; caliche and gravel surfacing; bids within 30 days; D. E. H. Manigault, State Div. Engr., El Paso, Tex. (See Machinery Wanted—Road Construction.)

Fla., Jacksonville—City, let contract to J. Y. Wilson, to pave following streets; Landon, Center, Magnolia, Forest, Palmetto, Walnut and Olevia Sts.; all brick with asphalt filler.

Fla., Jacksonville—City Comn., Frank H. Owens, Chrmn., will pave Adams St. with brick on concrete; First St., brick on sand; Margaret St., asphalt on concrete; Hogans St., asphalt on concrete; King St., asphalt on concrete.

Fla., Ocala—Marion County Comms. will construct 15-mi. section of Road No. 2 between Belleview and Lake County line; 140,000 sq. yds. surfacing, alternate bids on bituminous concrete and sheet asphalt, on either concrete or crushed stone base; also on plain cement concrete pavement; bids until Apr. 11; T. D. Lancaster, Jr., Clk., County Comms.; Wm. F. Cooke, State Highway Engr., Tallahassee, Fla. (See Mch. Wanted—Road Construction.)

Fla., Orlando—Orange County Comms. will grade portion of Orlando-East Coast road between Orlando and Bithlo; 16 mi.; bids until Apr. 18; B. M. Robinson, Clk., Circuit Court. (See Mch. Wanted—Road Construction.)

Fla., St. Petersburg—City will construct 80,000 sq. yds. street paving; bids until May 8; plans issuing 6 per cent bonds; E. C. Garvin, Director of Public Works.

Fla., Tampa—City, Chas. H. Brown, Mayor-Commr. will construct 80,000 sq. yds. paving; brick and concrete block; issue paving certificates; construction bids May 8.

Fla., Tavares—Lake County Comms., H. R. Ferran, Chrmn., will grade, drain and surface with sand clay or shell 19 mi. section of road A, in East Lake County Special Road and Bridge Dist., between Altoona and Astor; bids until Apr. 27; T. C. Smith, County Clk.; Geo. E. Heller, County Engr. (See Mch. Wanted—Road Construction.)

Fla., Wauchula—City, Board of Bond Trustees, I. Silverman, Secy., will construct about 58,500 sq. yds. paving; brick, cement, concrete, bituminous concrete or asphalt block; 58,500 sq. yds. rock or clay base; 39,440 lin. ft. concrete curb, etc.; bids until May 31; J. G. Kimmel, Engr., Arcadia, Fla. (See Mch. Wanted—Paving.)

Fla., Williston—City, Wm. Koehler, Clk., will lay 1600 sq. yds. paving; brick, asphaltic block or other paving upon rock base and sand cushion; construct 1½ mi. rock base, asphaltic macadam or other paving; bids until Apr. 18; Edward Drake, City Engr., Room 20, Holder Block, Ocala, Fla. (See Mch. Wanted—Paving.)

Ga., Atlanta—Fitzhugh Knox Real Estate Co., will construct streets in 65-acre site to be developed. (See Land Development.)

Ga., Jackson—Butts County voted \$150,000 bonds for road and highway improvements; Address County Comms.

Ga., Oakland City Sta., Atlanta—Realty Sales Corp., will grade and pave streets in

100-acre site to be developed. (See Land Development.)

Ga., Savannah—City, J. W. Motte, Director Public Works, let contract to Dixon Contracting Co. to pave following streets: Magnolia St., 6-in. concrete, cost \$13,057.50; re-surface Wheaton St., paint coat with 2-in. oil asphalt, cost \$1,733.92; will pave Gwinnett St.

Ky., Ashland—City, W. M. Salisbury, Mayor let contract to Hunt-Forbes Construction Co., at \$66,997.04 for paving 40,000 sq. yds. street in South Ashland, including Tenth and Ringo St.; bituminous material and brick or macadam. (Lately noted inviting bids.)

Ky., Princeton—Caldwell County Comms., Frank Walker, Chairman, will construct 5 mi. Princeton-Cadiz road, beginning at Station 150; macadam; grading, draining and surfacing; bids opened Apr. 5. (See Mch. Wanted—Road Construction.)

Ky., Williamsburg—State Highway Comn., Frankfort, Ky., will complete 14 mi. White County road; County will contribute \$19,000.

Ky., Williamstown—Grant County voted \$250,000 bonds for completing concrete highway extending from Covington to Scott county line. Address County Comms. (Lately noted to vote.)

La., Arcadia—Louisiana Highway Comn., 401 Maison Blanc Annex, New Orleans, La., will construct 15.04 mi. Arcadia-Natchitoches highway, Arcadia to Blenville; Blenville Parish; bids opened; W. T. Peterman, Chrmn.; Jas. H. Fourmy, State Highway Engr. (See Mch. Wanted—Road Construction.)

La., Donaldsonville—Ascension Parish will construct roads in Third Road Dist. in New River section; voted \$100,000 bonds. Address Police Jury.

La., Monroe—City, P. A. Poag, Secy., will pave Jackson St.; 28,000 sq. yds. paving; 16,000 ft. curb and gutter; 8000 ft. curb; 56 inlets, etc.; bids opened; R. S. Reynolds, City Engr. (See Mch. Wanted—Paving.)

La., Monroe—Union Construction Co. has contract for surfacing 13 mi. Monroe and Olive branch road.

La., Napoleonville—Louisiana Highway Comn., 401 Maison Blanc Annex, New Orleans, La., will construct 4.9 mi. Morgan City-Houma Highway; Assumption Parish; bids opened Apr. 3; W. T. Peterman, Chrmn.; Jas. M. Fourmy, State Highway Engr. (See Mch. Wanted—Road Construction.)

La., New Roads—Pointe Coupee Police Jury will complete projects 1 and 2 of Road Dist. No. 1, known as False River Project.

La., Pineville—Town, C. G. David, Clk., will pave Melrose St.; gravel; bids opened; H. J. Daigre, Engr. (See Mch. Wanted—Paving.)

La., Ruston—Lincoln Parish Police Jury plans improving additional highways.

La., St. Joseph—Louisiana Highway Commission, 332 Maison Blanche Annex, New Orleans, La., will construct 18.5 mi. St. Joseph-Somerset highway; Tensas Parish; bids until Apr. 17; W. T. Peterman, Chrmn. (See Mch. Wanted—Road Construction.)

La., St. Francisville—West Feliciana Parish Police Jury plans constructing 40 mi. road including scenic highway and Route 35, road from St. Francisville east to Bogalusa, etc.; will sell bonds.

Md., Baltimore—City let contract on percentage basis for street paving to P. Flanagan & Co., 2600 Harford road, Baltimore Asphalt Block and Tile Co., 1320 N. Monroe St.; American Paving & Contracting Co.,

Montebello; cost about \$200,000. (Lately noted.)

Md., Baltimore—Board of Awards will pave Carroll, Lawina, Queen Anne and Talbot roads; sheet asphalt; low bidder Patrick Reddington & Sons, 2 E. Lexington St., at \$38,394. (Lately noted inviting bids.)

Md., Baltimore—Paving Comsn. plans street improvements for Govans section including Oakland, Richwood and Ready Aves.; also Lakeside Ave., Payson St. and other streets; both sheet asphalt.

Md., Baltimore—City, Board of Awards, plans widening Charles St. from 66 to 80 ft. for about 2 mi.; also widen York Road from old city to new city line; C. H. Perring, Ch. Engr.

Miss., Ashland—Benton County let contract to F. D. Harvey & Co., Memphis, Tenn., at \$198,000 for constructing 30 mi. government road north and south from Hickory Flat to hard-surfaced road from LaGrange, Tenn. to Benton county line; sand-clay construction. (Lately noted inviting bids.)

Miss., Hazlehurst—Copolah County Supvrs. will construct 2000-ft. concrete walks around courthouse; bids opened.

Miss., McComb—City let contract to Smith Bros., Dallas, Tex., at \$100,000 for paving; brick, concrete base, bituminous filler and wearing surface; Kramer Engineering Co., Const. Engr., Magnolia, Miss.

Miss., New Albany—City, S. W. Beville, Mayor, will construct water bound macadam streets (Birmingham slag); 6000 sq. yds. concrete pavement; cost \$30,000; bids opened; T. E. Marshall, City Clk.; J. N. Wilson, Engr. Lately noted. (See Mch. Wanted—Paving; Cement.)

Mo., Bloomfield—State Highway Dept., Jefferson City, Mo., let contract to Mississippi-Arkansas Truck Co., Searcy, Ark., at \$35,495.23 to construct 4.601 mi. State road from Cairo to Poplar Bluff; gravel surfacing, etc.; grading, excavating, etc.; Stoddard County, Federal Aid Project No. 118, Section A; M. S. Murray, Div. Engr., Sikeston, Mo. (Lately noted bids until Mch. 7.)

Mo., Cameron—City will pave several streets; bids until Apr. 12. Address The Mayor. (See Mch. Wanted—Paving.)

Mo., Carthage—State Highway Dept., Jefferson City, Mo., let contract to Easley Brothers, Aurora, Mo., at \$18,880.43, to improve State road in Avilla Special Road Dist.; Jasper County, Federal Aid Project No. 169; H. P. Moberly, Div. Engr., Springfield, Mo. (Lately noted.)

Mo., Clinton—State Highway Dept., Jefferson City, Mo., let contract to Carterville Construction Co., Carterville, Mo., at \$7,149.24 to construct 3.2 mi. State rd. from Clinton to Osceola; Federal Aid Project No. 87, Section 1; to Carterville Construction Co., Carterville, Mo., at \$60,412.14 for 1.9 mi. State road from Clinton to Osceola; Federal Aid Project No. 87, Section 2; concrete pavement, etc.; grading, excavating, drainage structures, etc.; all Henry County; S. M. Rudder, Div. Engr., Ilgenfritz Bldg., Sedalia, Mo. (Lately noted bids until Mch. 4.)

Mo., Eminence—State Highway Dept., Jefferson City, Mo., let contract to Cooper's Construction Service Co., St. Louis, Mo., at \$119,087.97, to construct 4.006 mi. State rd. from Winona eastward and westward; grading, excavating, constructing drainage structures, etc.; Shannon County, State Aid Project No. 20.92; M. V. Murray, Div. Engr., Sikeston, Mo. (Lately noted bids until Feb. 21.)

Mo., Farmington—State Highway Dept., Jefferson City, Mo., will construct 1.941 mi. State road from Bismarck to Flat River; 16-ft. wide gravel pavement; grading, excavating, constructing drainage structures, etc;

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cost \$19,970.28; St. Francois County, State Aid Project No. 20,125; H. D. Griffith, Div. Engr., De Soto, Mo.

Mo., Galena—State Highway Dept., Jefferson City, Mo. let contract to Oberlander Bros., Nixa, Mo., at \$22,836 for constructing 3.610 mi. State road from Reed Springs to Blue Eye; Stone County, Federal Aid Project, No. 161, Section D. (Lately noted inviting bids.)

Mo., Kansas City—Board Public Works let street improvement contracts as follows: W. C. Mullins Construction Co. for grading Bellefontaine Meyer blvd.; J. E. Welsh, for plain concrete paving on 55th St. and 50th St. terrace; Halpin-Boyle Construction Co., for paving Broadway, Topping Ave., bituminous macadam on 33rd St. and other streets; M. D. Bogwell, for repaving macadam pavement on Bellevue and other streets.

Mo., Lexington—State Highway Dept., Jefferson City, Mo., let contract to Albert Hood, Independence, Mo., at \$9738.67, to construct 1.142 mi. State road from Wellington to East Mine; grading, excavating, etc.; Lafayette County State Aid Project No. 20,132; S. M. Rudder, Div. Engr., Igenfritz Bldg., Sedalia, Mo. (Lately noted bids until Feb. 24.)

Mo., Oregon—State Highway Dept., Jefferson City, Mo. will construct 6.693 mi. State road from Mound City eastward, Oregon eastward and Maitland southward; cost \$48, No. 20,37; bids until Apr. 13; A. C. Ling, No. 20,37; Holt County, State Aid Project, Div. Engr., Ballinger Bldg., St. Joseph, Mo. (See Mch. Wanted—Road Construction.)

Mo., Palmyra—State Highway Dept., Jefferson City, Mo., will construct 2.228 mi. State road from West Ely westward; cost \$12,939.78; Marion County, State Aid Project No. 20,38; bids until Apr. 14; W. J. Harlick, Div. Engr., Howe Bldg., Macon, Mo. (See Mch. Wanted—Road Construction.)

Mo., Pineville—State Highway Dept., Jefferson City, Mo., will construct 4.223 mi. State road from Lanagan to Noel; grading, excavating, constructing drainage structures, etc.; cost \$29,186.47; McDonald County; State Aid Project No. 20,152; H. P. Mobberley, Div. Engr., Woodruff Bldg., Springfield, Mo.

Mo., Savannah—State Highway Dept., Jefferson City, Mo., will construct 8.03 mi. State road on Jefferson Highway; grading excavating, constructing drainage structures, etc.; cost \$50,646.85; Andrew County, State Aid Project No. 20,121; A. C. Lingley, Div. Engr., Ballinger Bldg., St. Joseph, Mo.

Mo., St. Charles—City will pave downtown district; concrete; bids until Apr. 10. Address The Mayor. Lately noted. (See Mch. Wanted—Paving.)

Mo., St. Joseph—City will resurface King Hill Ave.; invite bids soon. Address Board of Public Works.

Mo., St. Louis—McKelvey Construction Co., has contract to improve Kings Highway Park, including streets, sidewalks, etc. (See Land Developments.)

Mo., Steelville—State Highway Dept., Jefferson City, Mo., will construct 5.193 mi. State road from Steelville to Cherryville; grading, excavating, constructing drainage structures, etc.; cost \$29,722.98; Crawford County, State Aid Project No. 20,149; H. D. Griffith, Div. Engr., De Soto, Mo.

Mo., Stockton—State Highway Dept., Jefferson City, Mo., will construct 3.47 mi. State road from Stockton to Greenfield; cost \$10,842.23; Cedar County, State Aid Project No. 20,136; bids until Apr. 14; M. S. Murray, Div. Engr., Sikeston, Mo. (See Mch. Wanted—Road Construction.)

Mo., Trenton—State Highway Dept., Jefferson City, Mo., let contract to G. E. Sampson, St. Joseph, Mo., at \$9939.36, to construct 2.931 mi. State road from Trenton northward and southward; grading, excavating, etc.; Grundy County, State Aid Project No. 2096; A. C. Lingley, Div. Engr., St. Joseph, Mo. (Lately noted bids until Feb. 23.)

N. C., Charlotte — Mecklenburg County Highway Comsn., let contract to Noll Construction Co., Nashville, Tenn. at \$100,000 for constructing 3½ mi. hard-surface road beginning in Myers Park and extending down the Providence road; 18-ft. wide, having 4-in. concrete base and 2-in. asphalt top. (Lately noted inviting bids.)

N. C., Hendersonville—Henderson County Road Trustees will construct hard-surface road between Hendersonville and Buncombe county line; including grading and bridge work; bids opened; W. P. Bane, Chrmn.

N. C., Leakesville—City will pave streets; cost about \$150,000; John W. Webb, and E. W. Cole, Civil and Constr. Engrs., Salisbury, N. C.

N. C., Lumberton—Town, will construct 20,000 sq. yds. paving; extend sewer and water systems; bids until Apr. 18; J. P. Russell, Clk.; Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C. Lately noted. (See Mch. Wanted—Paving.)

N. C., Rocky Mount—City, C. H. Harris, Clk., let contract to R. G. Lassiter & Co., at \$275,000 to pave streets; J. J. Wells, Engr. (Lately noted.)

N. C., Waynesville—Haywood County Commrs., H. Arthur Osborne, Chrmn., will construct 4.53 mi. hard-surface road between Canton and Woodrow; 47,000 sq. yds. plain and 47,000 sq. yds. reinforced concrete; 38,500 sq. yds. Topeka Top, or 38,500 sq. yds. sheet asphalt; bids until Apr. 12. (See Machinery Wanted—Road Construction.)

N. C., Wilmington—New Hanover County, Addison Hewlett, Chrmn. Commrs. will improve eastern end Eagles Island causeway road.

Okla., Miami—Ottawa County Commrs. will grade, gravel, etc. Miami-Welch road; also Afton-Fairland road; bids opened Apr. 3.

Okla., Okemah—Okfuskee County Commrs. voted \$500,000 bonds for constructing 71-mi. hard-surface road. (Lately noted to vote.)

Okla., Perry—City, F. F. Busch, Clk., will construct 7 blocks paving; brick and concrete.

Okla., Strang — Mayes County Commrs. Pryor, Okla., will invite new bids on constructing bridge over Grand river; \$45,000 available. (Previously noted.)

S. C., Abbeville—Abbeville County Highway Comsn., L. W. Keller, Secy., will construct 7.1 mi. top-soil road from city limits to Greenwood County; bids until Apr. 8; H. B. Humbert, County Engr. (See Mch. Wanted—Road Construction.)

S. C., Allendale—Allendale County Supvrs. will construct 10.369 mi. Allendale-Augusta road; bids until Apr. 11; J. E. Bryan, County Supvr. (Lately noted. (See Mch. Wanted—Road Construction.)

S. C., Florence—City will lay 100,000 sq. yds. paving; 50,000 lin. ft. concrete curb and gutter; bids until Apr. 20; Adams & Ervine, Engrs., Barringer Bldg., Florence, S. C.; Nisbet Wingfield, 814 Lamar Bldg., Augusta, Ga.

S. C., Greenwood — City, A. S. Hartzog, Mayor, let paving contracts as follows: Case & Cothran, Atlanta, Ga., for 50,000 sq. yds. roadway pavement; Greenville Paving Co., Greenville, S. C., for 18,000 yds. sidewalk paving; both concrete; total cost \$200,000;

Tomlinson Engineering Co., Engr., Columbia, S. C. (Lately noted inviting bids.)

S. C., Greer—City let contract to Greenville Paving Co., Greenville, S. C., for constructing 10,000 ft. sidewalk and street paving.

S. C., Orangeburg—City sold \$250,000 bonds for paving streets. Address The Mayor. (Previously noted.)

S. C., Spartanburg—Spartanburg County, J. J. Vernon, Supr., will resurface roads; H. Straling, Civil Engr.

Tenn., Cleveland—City will pave several streets in Improvement Distrs. Nos. 11, 16, 17, 18, 21, 22, 23, 24, 25 and 26; asphaltic concrete, with or without concrete base; bituminous macadam (penetration), cement concrete, etc.; 16,250 cu. yds. grading; 62,100 sq. yds. paving; 12,735 sq. yds. walk, etc.; bids until Apr. 19; S. D. Newton, Engr., Cleveland, Tenn. (See Mch. Wanted—Paving.)

Tenn., Erwin—City, C. R. Wohlford, Mayor, will expend \$200,000 to improve paving, sewers, etc.

Tenn., Lawrenceburg — State Highway Dept., Nashville, Tenn. will construct 16 mi. roads in Lawrence County, known as Waynesboro Road from Lawrenceburg to Wayne County line; bids until April 14.

Tenn., Wartburg—Morgan County Court authorized \$200,000 bonds for part of Dixie highway.

Tex., Coleman—Coleman County, L. G. Matthews, County Judge, let contract to McCall-Moore Engineering Co., 308 Amicable Bldg., Waco, Tex., at \$166,574 to build reinforced concrete girder slab and steel span bridges and reinforced concrete culverts on State Highway No. 13; subject to approval of State Highway Dept.; W. E. Dickerson, County Engr.

Tex., Dallas—City, will pave Clinton Ave. from King's Highway to South City limits and Belmont St., from Greenville Ave. to city limits; invite bids soon; Geo. D. Fartree, City Engr.; M. G. James, City Secy. (See Machinery Wanted—Paving.)

Tex., Dallas — Dallas County, Chas. E. Gross, County Auditor, will construct Seagoville, Richardson, Beckley, Bonnie View, Westmorland, Maple Ave., Midway, Sachse roads, etc.; \$1,700,000 bond issue available; Nagle, Witt and Rollins, Engrs.

Tex., Galveston—City, J. A. Thomas, Mayor, will pave Lindsay St.; 6 to 8-in. gravel base; 2-in. rock asphalt surface; cost \$42,000; construction by city; Johnson Williams, City Engr. (Lately noted.)

Tex., Gatesville—City has under construction street improvements. Address The Mayor.

Tex., Georgetown—City will pave 7 mi. streets; voted \$85,000 bonds. Address The Mayor. (Lately noted to vote.)

Tex., Houston—Harris County will resurface 30-mi. Crosby road from city limits to county line; crushed rock and shell and bituminous topping; let contract soon; Howe & Wise, County Engrs.

Tex., Houston—City, O. F. Holcombe, Mayor, will pave streets; vote Apr. 29 on \$750,000 bonds. (Lately noted.)

Tex., Houston—Harris County, H. L. Washburn, County Auditor, will rebuild Alameda road; bids until Apr. 10. (See Mch. Wanted Road Construction.)

Tex., Jourdanton—Atascosa County, W. H. Hill, County Judge, plans completing state Highway No. 2 from Pleasanton; State Highway granted \$19,000 State Aid.

Tex., Lufkin—Angelina County, John F. Robinson, County Judge, plans constructing 16 mi. 16 ft. gravel road on State Highway

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

No. 7, from Jasper County line to Zavalla; cost \$165,000; constructing 13 mi. 16 ft. gravel road on Zavalla-Huntington road; cost \$120,000; G. R. Abney, County Engr.

Tex., New Braunfels—City, Chas. Alver, Mayor, will improve streets; voted Apr. 4 on \$75,000 bonds.

Tex., Port Arthur—City plans constructing 100,000 sq. yds. street paving; M. C. Irwin, City Engr.

Tex., Sierra Blanca—Chief Engr., U. S. Bureau of Public Roads, Washington, D. C. approved plans to construct 3.2 mi. on State Highway No. 1, Hudspeth County; 16 ft. gravel road; cost \$11,155.40; Herbert Schroeter, County Engr., P. A. Hazard, County Judge.

Tex., Texarkana—Street—City may vote on \$5,000, \$100,000 or \$200,000 bonds for additional street paving. Address The Mayor.

Tex., Tyler—Smith County Highway Comsn. let contract for constructing 25 mi. Jim Hogg highway from Wood county line near Mineola to Tyler; cost \$250,000; D. R. Pendleton, County Judge; D. K. Caldwell, County Engr. (Lately noted.)

Va., Surry—Surry County Supvrs. will construct 4.11 mi. Dendron road; 3 mi. Waverly-Clarmont road; bids opened. (See Mch. Wanted—Road Construction.)

Va., Waynesboro—City, will pave 18,000 sq. yds. streets; bituminous macadam; bids opened; C. J. Wright, Treas. (See Mch. Wanted—Paving.)

W. Va., Bluefield—City, Clarence E. Ridley, Mgr., will construct concrete sidewalks and crosswalks; bids until Apr. 11. (See Mch. Wanted—Paving.)

W. Va., Bridgeport—Town, J. W. Johnson, Mayor, will grade, pave and curb Philadelphia Ave., Virginia St., Johnson Ave. and Mechanic St.; 12,000 lin. ft. curbing and 13,000 sq. yds. paving; concrete, penetration asphalt, tarva double seal bituminous macadam; bids until Apr. 20; Hornor Brothers, Engrs., 314 W. Main St., Clarksburg; W. Va.; H. W. Garrett, Recorder. Lately noted. (See Mch. Wanted—Paving.)

W. Va., Elkins—Randolph County let contract to M. J. Fahey, Clarksburg, W. Va., at \$80,992.30 to construct 3.5 mi. Norton-Mable road; bituminous macadam pavement; penetration methods; H. C. Kesling, County Clk.; Edw. G. Elliott, County Road Engr. Lately noted bids until Mch. 24. (See Mch. Wanted—Paving Equipment.)

Sewer Construction.

Ark., Pine Bluff—City let contract to Kellher Construction Co., Little Rock, Ark., at \$94,387 for storm sewer and paving in Linden St. Dist. No. 52; Fred Bennett, City Engr.

D. C., Washington—Washington Suburban Sanitary Comsn., Evans Bldg., New York Ave., will construct 12,200 ft. of 10 to 18 in. sewers and appurtenances; bids until April 17; Contract 27-8; Robt. B. Morse, Ch. Engr., Hyattsville, Md. (See Machinery Wanted—Sewer Construction.)

D. C., Washington—Washington Suburban Sanitary Comsn., Evans Bldg., New York Ave., let contract at \$55,022 to construct trunk line sewer down Little Falls Branch from Chevy Chase sewer to river road; laying of sewer pipe from Takoma Park to Chevy Chase and laying pipe connecting Takoma Park, Kensington and Chevy Chase. (Lately noted inviting bids.)

Fla., Pensacola—City Comsn. recommended \$6227 appropriation for constructing sewers on parts of DeVilliers, Brainard, Garden, LaRue and Strong Sts.

Ga., Atlanta—Fitzhugh Knox Real Estate

Co., construct sewers in development of 65 acre residential site. (See Land Development.)

Ga., Atlanta—City opens bids Apr. 3 to construct Orne St. trunk sewer from the Southern Railroad culvert, south, a distance of about 2236 lin. ft.; J. N. Landers, Pur. Agt. (See Mch. Wanted—Sewer Construction.)

Ga., Atlanta—City, J. N. Landers, Pur. Agt., will construct Highland Ave. trunk sewer from Station 38-60 to Station 63-10 and Ponce De Leon and Angier Ave. connecting sewer; new bids opened Apr. 3. Lately noted rejecting bids. (See Mch. Wanted—Sewer Construction.)

Ga., Oakland City, Sta., Atlanta—Realty Sales Corp., Atlanta, will install sewer in 100-acre sub-division. (See Land Development.)

La., Monroe—City, P. A. Poag, Secy., will construct 56 inlets in connection with paving Jackson St.; 1000 ft. 12-in., 1600 ft. 15-in. and 600 ft. 18-in. pipe; 1500 lin. ft. headers, etc.; bids opened Apr. 3; R. S. Reynolds, City Engr. (See Mch. Wanted—Sewer Construction.)

Mo., St. Louis—McKelvey Construction Co. has contract for improving Kingshighway Park, construct sewers, streets, etc.

N. C., Conover—City, C. R. Brady, Mayor, construct 2½ mi. of 6-in. and 8-in. sewers; cost about \$15,000; Spoon & Lewis, Const. Engrs., Greensboro, N. C. (Lately noted.)

N. C., Leaksville—City will construct sewer system; cost about \$110,000; John W. Webb and E. W. Cole, Civil and Const. Engrs.

N. C., Lumberton—Town, J. P. Russell Clk. will extend sewer and water works; 4 mi. of 8-in. to 30-in. sewers, 5½ mi. of 1½, 6-in. and 10-in. mains for water works extension; 500,000 gal. concrete reservoir; bids until Apr. 18; Carolina Engineering Co., Engrs., 412 Southern Bldg., Wilmington, N. C.; lately noted. (See Mch. Wanted—Sewer Construction.)

Okla., Wilburton—City will construct sanitary sewer system, improve light plant and purchase fire fighting equipment; voted \$201,000 bonds. Address The Mayor.

S. C., Florence—City, W. R. Barringer, Mayor, will construct 21,000 lin. ft. of storm drain, 8 to 66-in. in diameter, with necessary manholes, catch basins, etc.; bids until Apr. 20. (See Mch. Wanted—Sewer Construction.)

S. C., Florence—Dargan-Harlee Co. will install sewer and water system in sub-division. (See Land Development.)

S. C., Walhalla—City Comms., Geo. Ansel, Chmn., will construct complete sewerage and water system; cost \$110,000; bids until Apr. 14; Ryan Engineering Co., Engr., 20 Arcade Bldg., Columbia, S. C. (See Mch. Wanted—Sewer Construction.)

Tenn., Cleveland—City, S. D. Newton, Civil and Municipal Engr. will construct 3000 lin. ft. of 12 in., 2330 lin. ft. of 15 in., 3025 lin. ft. 18 in. and 600 lin. ft. of 24 in. storm sewers; 84 storm inlets; 13 manholes, etc.; bids until April 19. (See Mch. Wanted—Sewer Construction.)

Tenn., Erwin—City will expend \$35,000 to construct additional sewers; bids invited. Address The Mayor. (Lately noted to issue \$30,000 bonds.)

Tenn., Lenoir City—Town, S. H. Monger, Recorder, will construct sanitary sewer system; 38 manholes, depth 0-4, 58,954 lin. ft. 8-in. pipe; 41 manholes, 4-6 depth, 4771 lin. ft. 12-in. pipe; 39 manholes, 6-8 depth, 1945 lin. ft. 18-in. pipe; 15 manholes, 8-10 depth, 3850 lin. ft. 24-in. pipe; 12 manholes, 10-12 depth; 7 manholes, 15-16 depth, 900

8-in. Y's; 125 cu. yds. of concrete and septic tank mixed 1-2-4; 5000 lbs. reinforced steel; trenching 10,513 lin. ft. 8-in. pipe, cut 0-4; 13,626 lin. ft. 8-in. pipe, cut 4-6; 9760 lin. ft. 8-in. pipe, cut 6-8; 6214 lin. ft. 8-in. pipe, cut 8-10; and other pipe varying in size and quantities from 2314 lin. ft. 8-in. pipe, cut 10-12 depth to 877 lin. ft. 24-in. pipe, cut 4-6; one coffer dam, approximate length 200 ft.; 146 lin. ft. cast iron pipe; concrete in outfall, 170 cu. yds.; bids opened Apr. 3. (See Mch. Wanted—Sewer Construction.)

Tex., Breckenridge—McKenzie Construction Co. has contract for constructing sewer system; 12 mi. of piping; \$235,000 available. (Previously noted.)

Tex., Dallas—Myers & Noyes, Engrs., 1107 Dallas County Bank Bldg., will open bids to construct 8500 ft. of tile sewer mains and 7000 ft. of water mains in Country Club Estates.

Tex., Dallas—City will construct storm sewer on Clinton Ave., between 8th and 9th Sts. Address The Mayor.

Tex., El Paso—City, W. C. Stewart, Engr. will construct \$185,000 reclamation ditch.

Tex., Groesbeck—City let contract to James Contracting Co., Southland Hotel, Dallas, Tex., to install sewer system; Henry Exall Elrod Engineering Co., Const. Engr., 3206 Elm St., Dallas. (Lately noted.)

Tex., Houston—City, O. F. Holcombe, Mayor, votes April 29 on \$250,000 bonds for sewer construction. (Lately noted.)

Tex., Kerrville—American Legion Sanatorium, S. B. Cowell, Chmn. Building Comm. is having plans prepared by Phelps & DeWees, Archt., Gunter Bldg., San Antonio, Tex., for sewer, sewage disposal and water softening plant; will invite competitive bids.

Tex., Port Arthur—City, E. R. Thomas, Clk., will extend sanitary and storm sewers; 6-in. to 36-in. vitrified pipe and concrete pipe; Nagle, Witt and Rawlins, Const. Engr., Port Arthur. (Lately noted.)

Tex., Port Arthur—Tile Pipe—Imhoff & Son Co., will establish plant to mfr. cement storm sewer tile pipe in connection with sewer work.

W. Va., Huntington—City contemplates voting on \$500,000 bonds to construct sewer system, electric lights and street improvements. Mat Miser, Commr. of Streets and Sewers. (Lately noted.)

Telephone Systems.

Ala., Roanoke—Roanoke Telephone Co., H. H. Cauthen, Mgr., plans installing radio set connecting it with auditorium.

D. C., Washington—Constructing Quartermaster, Room 2328 Munitions Bldg., will construct radio station at Washington Barracks; bids until April 10.

Fla., Clearwater—H. C. Brasfield, Mgr., Clearwater Telephone Co., has under construction telephone exchange, install automatic system.

Fla., Kissimmee—Otto Wettstein, Jr., Live Oak, Fla. acquired Kissimmee Telephone System, contemplate immediate improvements.

Ga., Athens—Georgia State College of Agriculture, Andrew Soule, Prest.; install Government radio station.

Tex., Grand Saline—Grand Saline Telephone Co., capital \$25,000, incptd., by Thomas S. McGrain, C. O. and E. L. Dixon.

Va., Richmond—C. A. Sherry, Chief of Police, has plans for installing radio wireless apparatus in police headquarters on Broad St., equipment will have sending distance of 400 mi.

... writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Textile Mills.

Ala., Athens—Spencer, Turner & Co., New York, and others, reported to have purchased Fulton Cotton Mill.

Ala., Montgomery—Chambray Cloth—State, Thos. E. Kilby, Governor, will establish 10,000 spindle mill at Kilby State Prison, to mfr. chambray cloth; monthly capacity 400,000 yds.; entire output to be mfrd. into shirts by the Reliance Mfg. Co., of Chicago, Ill. (See Misc. Factories.)

Ga., Augusta—Towels, etc.—Globe Mfg. Co., install 128 looms; equipment purchased.

Ky., Mayfield—Cassimeres—Mayfield Woolen Mills, M. J. Wright, Gen. Mgr., let contract to X. B. Wickersham and H. B. Wright, both of Mayfield, to construct spinning room; 202x72 ft.; steel and brick; daylight building. (Lately noted to erect building and install 1740 spindles and 20 looms.)

N. C., Rockingham—Cotton—Midway Mills, reported to install 1-story cloth room.

W. Va., Parsons—Blankets—Edw. C. Hall, Prest. Phillippi Blanket Mills, Phillippi, W. Va. interested in establishing mill.

Water Works.

Aa., Eufula—City will improve water works; install filtering system. Address The Mayor.

Fla., Miami—City will install water main on portions of 16th, 8th Sts. & 12th Ave.; contemplate extension to various other streets; Mr. Wharton, City Mgr.

Fla., Pensacola—City will extend water works; let contract for 85 tons of 12-in. piping; fire hydrants, etc. Address The Mayor. (Previously noted.)

Ga., Atlanta—Fitzhugh Knox Real Estate Co., install water works in development of 65 acre residential site. (See Land Development.)

Ga., Oakland, City Sta., Atlanta—Realty Sales Corp., Atlanta, will install water works in 100-acre sub-division. (See Land Development.)

La., Houma—City voted \$200,000 bonds for water and purification plant, and electric lights. Address The Mayor. (Lately noted to vote.)

La., New Orleans—City, Sewerage and Water Board, Geo. G. Earl, Gen. Supt., will install additional pumping mch. at water works; 2 boilers of 1500-1800 H. P. capacity each, 2 36-in. pumps and motors; increasing capacity to 100,000,000 gallons per day; cost about \$60,000; bids received; later may increase purification system. (Lately noted.)

N. C., Conover—City, C. R. Brady, Mayor, will construct water works system; install wells, pump, motor, tank, hydrants; about 2½ mi. of 4-in., 6-in. and 8-in. cast iron mains; motor driven plunger pump, 150 gal. per minute; 160 ft. head; 75,000 gal. tank on 90 ft. tower; cost about \$35,000; Spoon & Lewis, Consult. Engr., Greensboro, N. C. (Lately noted.)

N. C., Greensboro—City will extend water works; contract let to Lynchburg Foundry Co., Lynchburg, Va. for 790 tons of water pipe at \$36.325; to R. D. Wood & Co., Phila., Pa., at \$2584.80 for fire hydrants; to H. Mueller Mfg. Co., New York, at \$1974 for curb cocks, goose necks and other fittings. (Lately noted.)

N. C., Leaksville—City will construct water system, cost about \$125,000; John W. Webb and E. W. Cole, Civil and Const. Engrs., Salisbury, N. C.

N. C., Lumberton—Town, J. P. Russell, Clk., will extend water and sewer system; 5½ mi. of 1½-in., 6-in. and 10-in. mains for

water works; 500,000 gal. concrete reservoir; 4 mi. of 8-in. to 30-in. sewers; bids until Apr. 18; the Carolina Engineering Co., Engrs., 412 Southern Bldg., Wilmington, N. C.; lately noted. (See Mch. Wanted—Water Works.)

N. C., Morgantown—Town, Otis B. Lackey, Mgr., will install gravity system of water works; lately noted about 12 mi. of pipe line and dam; 10,000,000 gallons daily capacity; estimated cost \$200,000. (See Mch. Wanted—Water Pipe.)

Okla., Wewoka—City receives bids to enlarge water works; dam Wewoka Creek, construct settling basin and install purifiers and chlorinators. Address The Mayor. (Lately noted.)

S. C., Florence—Dargan-Harlee Co. will install water and sewer system in connection with sub-division development. (See Land Development.)

S. C., Walhalla—City Commrs., Geo. Ansel, Chrmn., will construct complete water and sewerage system; cost \$110,000; bids until Apr. 14; Ryan Engineering Co., Engr., 20 Arcade Bldg., Columbia, S. C. (See Mch. Wanted—Water Works.)

Tenn., Memphis—City, let contract to Fuller & McClintock, New York, to construct artesian water works system; cost \$2,000,000. (Lately noted to rebuild and extend water system.)

Tenn., Rossville—City, Roy McFarland, Mayor, will construct water mains to connect with present water system of Chattanooga, Tenn.; voted \$50,000 bonds.

Tex., Cameron—Cameron Water, Power & Light Co., will improve plant; increase capacity; install additional treating plant; cost \$40,000.

Tex., Dallas—Myers & Noyes, Engrs., 1107 Dallas County Bank Bldg., will open bids on constructing about 7000 ft. of water mains and 8500 ft. of tile sewer mains, in Country Club Estates.

Tex., Dallas—City, Fred Appel, Water Commr., will construct temporary water plant at Bachman's Dam; daily capacity 10,000,000 gallons; cost \$6000.

Tex., Groesbeck—City let contract to James Contracting Co., Southland Hotel, Dallas, Tex., to install water system; Henry Exall Elrod Engineering Co., Consult. Engr., 3206 Elm St., Dallas. (Lately noted.)

Tex., Port Arthur—City, E. R. Thomas, Clk., will extend pipe lines; 2000 gals. per minute, motor driven centrifugal pump, to pump against 150 ft. head total; will invite bids; N. C. Erwin, City Engr. (Lately noted.)

Tex., Clarendon—City will improve water works; votes Apr. 11 on \$75,000; W. D. Howren, City Engr.

Woodworking Plants.

Fla., Lake City—Barrels—Interstate Cooperation Co., E. P. Waring, Secy., 400 Consolidated Bldg., Jacksonville, Fla. let contract to R. H. House to erect plant; install light mch., all purchased; mfr. spirit and syrup barrels. (Lately noted to erect first unit of plant.)

Ky., Louisville—Millwork, etc.—Kentucky Lumber and Millwork Co., capital \$25,000, inceptd. by C. A. Christian, W. R. Davis and J. M. Chappell.

Ky., Louisville—Millwork, etc.—Southern Wood Products Co., Geo. Klerer, Jr., Mgr., let contract to C. R. Markert, to erect 70x50-ft. mill building and 30x100-ft. warehouse, brick and construction; mch. all purchased; daily output interior trimmings and general millwork. (Lately noted increased capital to \$100,000.)

Miss., Crystal Springs—Furniture—R. J.

Young has under construction plant to mfr. furniture.

Miss., Lumberton—Truck Bodies—Martin-Parry Corp., York, Pa., will erect 50x35-ft. plant; Edward Hines Lumber Co., Const. Engr.; mfr. commercial bodies, capacity 150 daily. (Lately noted to establish plant.)

N. C., Shelby—Sash, Doors, etc.—E. W. Wilson and J. L. Taylor, both Rutherfordton, N. C., purchased lumber holdings, remodel plant for mfr. of sash doors, mantles, etc.

S. C., Great Falls—Furniture—Clark Plyler Furniture Co., capital \$10,000, inceptd. with M. R. Clark, Prest.-Treas.; C. D. Plyler, V.-P. and Secy.

S. C., Kingstree—Furniture—Williamsburg Furniture Co., capital \$10,000, inceptd. with A. W. Reynolds, Prest.; J. T. Smith, Secy.-Treas.

Tex., Slaton—Furniture—Slaton Furniture Co., capital \$25,000, inceptd. by A. E. Hower-ton, J. S. Lanham and C. B. Smith.

FIRE DAMAGE

Ala., Liberty—Moses & Hendrix's building.

Ala., Troy—Standard Chemical & Oil Co.'s Mill No. 1; loss \$75,000.

Ala., Winfield—S. W. Bishop & Son, Ernest & Webster, Sizemore & Ward, W. B. Musgrove's stores; Hill Cafe; White's Cafe; loss about \$90,000.

Ark., Jonesboro—Garage of Scott Ice Cream Co.; loss \$10,000.

Fla., Arcadia—Arcadia Lumber Co.'s plant; loss \$50,000.

Fla., Brandon—Love Brandon's building.

Fla., Laurel Hill—J. H. Givens' barn and dwelling.

Fla., Pass-a-Grille—Sullivan Apartments, loss \$30,000; Leon Backer's cottage, \$5000; cottage owned by Jas. H. Simmons, Niagara Falls, N. Y., \$7000.

Fla., Pineda—Pineda Lumber Co.'s plant; loss about \$250,000.

Ga., Clearfield—Elk Tanning Co.'s plant; loss \$300,000.

Ga., Columbus—Bradley Fertilizer Co.'s plant; loss \$90,000.

Ga., Montezuma—T. R. McKenzie estate, C. L. DeVaughn and W. M. Lewis estate's buildings.

Ga., Moultrie—Huber Lumber Co.'s planing mill and dry kiln; loss \$60,000.

Ga., Shellman—Princess Theater.

Ga., Thomasville—C. L. Thompson's residence.

Ga., Valdosta—J. N. Bray Lumber Co.'s plant; loss from \$50,000 to \$75,000.

Ky., Louisville—W. S. Matthews & Sons' rehanding tobacco plant; loss about \$205,000.

La., Bogalusa—Bogalusa Turpentine Co.'s Turpentine still; loss about \$7000.

Md., Baltimore—Gentlemen's Driving Park clubhouse, Old Pimlico Road and Belvidere Ave.

Md., Baltimore—Victoria Theater, 415 E. Baltimore St., owned by Cohen, Hartz and Gephardt.

Miss., Hattiesburg—M. D. King's residence on Bay St.

Miss., Tutwiler—Harrison Building, owned by R. J. Searcy; loss \$18,000.

Mo., Eugene—Schell Mercantile Co., Bank of Eugene and Thompson Mercantile Store's buildings.

Mo., Harrisburg—Odd Fellow's Lodge Hall.

N. C., Jonesboro—Tinney Inn, owned by Chas. Lawrence; loss \$12,000.

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Tex., Sierra Blanca—Chief Engr., U. S. Bureau of Public Roads, Washington, D. C. approved plans to construct 3.2 mi. on State Highway No. 1, Hudspeth County; 16 ft. gravel road; cost \$11,155.40; Herbert Schroeter, County Engr., P. A. Hazzard, County Judge.

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Tex., Tyler—Smith County Highway Comsn. let contract for constructing 25 mi. Jim Hogg highway from Wood county line near Mineola to Tyler; cost \$250,000; D. R. Pendleton, County Judge; D. K. Caldwell, County Engr. (Lately noted.)

Va., Surry—Surry County Supvrs. will construct 4.11 mi. Dendron road; 3 mi. Waverly-Clarmont road; bids opened. (See Mch. Wanted—Road Construction.)

Va., Waynesboro—City, will pave 18,000 sq. yds. streets; bituminous macadam; bids opened; C. J. Wright, Treas. (See Mch. Wanted—Paving.)

W. Va., Bluefield—City, Clarence E. Ridley, Mgr., will construct concrete sidewalks and crosswalks; bids until Apr. 11. (See Mch. Wanted—Paving.)

W. Va., Bridgeport—Town, J. W. Johnson, Mayor, will grade, pave and curb Philadelphia Ave., Virginia St., Johnson Ave. and Mechanic St.; 12,000 lin. ft. curbing and 13,000 sq. yds. paving; concrete, penetration asphalt, tarvia double seal bituminous macadam; bids until Apr. 20; Hornor Brothers, Engrs., 314 W. Main St., Clarksburg; W. Va.; H. W. Garrett, Recorder. Lately noted. (See Mch. Wanted—Paving.)

W. Va., Elkins—Randolph County let contract to M. J. Fahey, Clarksburg, W. Va., at \$80,992.30 to construct 3.5 mi. Norton-Mable road; bituminous macadam pavement; penetration methods; H. C. Kesling, County Clk.; Edw. G. Elliott, County Road Engr. Lately noted bids until Mch. 24. (See Mch. Wanted—Paving Equipment.)

Sewer Construction.

Ark., Pine Bluff—City let contract to Kehler Construction Co., Little Rock, Ark., at \$94,387 for storm sewer and paving in Linden St. Dist. No. 52; Fred Bennett, City Engr.

D. C., Washington—Washington Suburban Sanitary Comsn., Evans Bldg., New York Ave., will construct 12,200 ft. of 10 to 18 in. sewers and appurtenances; bids until April 17; Contract 27-S; Robt. B. Morse, Ch. Engr., Hyattsville, Md. (See Machinery Wanted—Sewer Construction.)

D. C., Washington—Washington Suburban Sanitary Comsn., Evans Bldg., New York Ave., let contract at \$55,022 to construct trunk line sewer down Little Falls Branch from Chevy Chase sewer to river road; laying of sewer pipe from Takoma Park to Chevy Chase and laying pipe connecting Takoma Park, Kensington and Chevy Chase. (Lately noted inviting bids.)

Fla., Pensacola—City Comsn. recommended \$6227 appropriation for constructing sewers on parts of DeVilliers, Brainard, Garden, LaRue and Strong Sts.

Ga., Atlanta—Fitzhugh Knox Real Estate

Co., construct sewers in development of 65 acre residential site. (See Land Development.)

Ga., Atlanta—City opens bids Apr. 3 to construct Orme St. trunk sewer from the Southern Railroad culvert, south, a distance of about 2236 lin. ft.; J. N. Landers, Pur. Agt. (See Mch. Wanted—Sewer Construction.)

Ga., Atlanta—City, J. N. Landers, Pur. Agt., will construct Highland Ave. trunk sewer from Station 38-60 to Station 63-10 and Ponce De Leon and Angler Ave. connecting sewer; new bids opened Apr. 3. Lately noted rejecting bids. (See Mch. Wanted—Sewer Construction.)

Ga., Oakland City, Sta., Atlanta—Realty Sales Corp., Atlanta, will install sewer in 100-acre sub-division. (See Land Development.)

La., Monroe—City, P. A. Poag, Secy., will construct 56 inlets in connection with paving Jackson St.; 1000 ft 12-in., 1600 ft 15-in. and 600 ft 18-in. pipe; 1500 lin. ft. headers, etc.; bids opened Apr. 3; R. S. Reynolds, City Engr. (See Mch. Wanted—Sewer Construction.)

Mo., St. Louis—McKelvey Construction Co. has contract for improving Kingshighway Park, construct sewers, streets, etc.

N. C., Conover—City, C. R. Brady, Mayor, construct 2½ mi. of 6-in. and 8-in. sewers; cost about \$15,000; Spoon & Lewis, Const. Engrs., Greensboro, N. C. (Lately noted.)

N. C., Leaksville—City will construct sewer system; cost about \$110,000; John W. Webb and E. W. Cole, Civil and Const. Engrs.

N. C., Lumberton—Town, J. P. Russell Clk. will extend sewer and water works; 4 mi. of 8-in. to 30-in. sewers, 5½ mi. of 1½, 6-in. and 10-in. mains for water works extension; 500,000 gal. concrete reservoir; bids until Apr. 18; Carolina Engineering Co., Engrs., 412 Southern Bldg., Wilmington, N. C.; lately noted. (See Mch. Wanted—Sewer Construction.)

Okl., Wilburton—City will construct sanitary sewer system, improve light plant and purchase fire fighting equipment; voted \$201,000 bonds. Address The Mayor.

S. C., Florence—City, W. R. Barringer, Mayor, will construct 21,000 lin. ft. of storm drain, 8 to 66-in. in diameter, with necessary manholes, catch basins, etc.; bids until Apr. 20. (See Mch. Wanted—Sewer Construction.)

S. C., Florence—Dargan-Harlee Co. will install sewer and water system in sub-division. (See Land Development.)

S. C., Walhalla—City Comms., Geo. Ansel, Chrmn., will construct complete sewerage and water system; cost \$110,000; bids until Apr. 14; Ryan Engineering Co., Engr., 20 Arcade Bldg., Columbia, S. C. (See Mch. Wanted—Sewer Construction.)

Tenn., Cleveland—City, S. D. Newton, Civil and Municipal Engr. will construct 3000 lin. ft. of 12 in., 2330 lin. ft. of 15 in., 3025 lin. ft. of 18 in. and 600 lin. ft. of 24 in. storm sewers; 84 storm inlets; 13 manholes, etc.; bids until April 19. (See Mch. Wanted—Sewer Construction.)

Tenn., Erwin—City will expend \$35,000 to construct additional sewers; bids invited. Address The Mayor. (Lately noted to issue \$30,000 bonds.)

Tenn., Lenoir City—Town, S. H. Monger, Recorder, will construct sanitary sewer system; 38 manholes, depth 0-4, 58,954 lin. ft. 8-in. pipe; 41 manholes, 4-6 depth, 4771 lin. ft. 12-in. pipe; 39 manholes, 6-8 depth, 1945 lin. ft. 18-in. pipe; 15 manholes, 8-10 depth, 3850 lin. ft. 24-in. pipe; 12 manholes, 10-12 depth; 7 manholes, 15-16 depth, 900

8-in. Y's; 125 cu. yds. of concrete and septic tank mixed 1-2-4; 5000 lbs. reinforced steel; trenching 10,513 lin. ft. 8-in. pipe, cut 0-4; 13,626 lin. ft. 8-in. pipe, cut 4-6; 9760 lin. ft. 8-in. pipe, cut 6-8; 6214 lin. ft. 8-in. pipe, cut 8-10; and other pipe varying in size and quantities from 2314 lin. ft. 8-in. pipe, cut 10-12 depth to 877 lin. ft. 24-in. pipe, cut 4-6; one coffer dam, approximate length 200 ft.; 146 lin. ft. cast iron pipe; concrete in outfall, 170 cu. yds.; bids opened Apr. 3. (See Mch. Wanted—Sewer Construction.)

Tex., Breckenridge—McKenzie Construction Co. has contract for constructing sewer system; 12 mi. of piping; \$235,000 available. (Previously noted.)

Tex., Dallas—Myers & Noyes, Engrs., 1107 Dallas County Bank Bldg., will open bids to construct 8500 ft. of tile sewer mains and 7000 ft. of water mains in Country Club Estates.

Tex., Dallas—City will construct storm sewer on Clinton Ave., between 8th and 9th Sts. Address The Mayor.

Tex., El Paso—City, W. C. Stewart, Engr. will construct \$185,000 reclamation ditch.

Tex., Groesbeck—City let contract to James Contracting Co., Southland Hotel, Dallas, Tex., to install sewer system; Henry Exall Elrod Engineering Co., Const. Engr., 3206 Elm St., Dallas. (Lately noted.)

Tex., Houston—City, O. F. Holcombe, Mayor, votes April 29 on \$250,000 bonds for sewer construction. (Lately noted.)

Tex., Kerrville—American Legion Sanatorium, S. B. Cowell, Chrmn. Building Comm. is having plans prepared by Phelps & DeWees, Archt., Gunter Bldg., San Antonio, Tex., for sewer, sewage disposal and water softening plant; will invite competitive bids.

Tex., Port Arthur—City, E. R. Thomas, Clk., will extend sanitary and storm sewers; 6-in. to 36-in. vitrified pipe and concrete pipe; Nagle, Witt and Rawlins, Const. Engr., Port Arthur. (Lately noted.)

Tex., Port Arthur—Tile Pipe—Imhoff & Son Co., will establish plant to mfr. cement storm sewer tile pipe in connection with sewer work.

W. Va., Huntington—City contemplates voting on \$500,000 bonds to construct sewer system, electric lights and street improvements. Mat Miser, Commr. of Streets and Sewers. (Lately noted.)

Telephone Systems.

Ala., Roanoke—Roanoke Telephone Co., H. H. Cauthen, Mgr., plans installing radio set connecting it with auditorium.

D. C., Washington—Constructing Quartermaster, Room 2328 Munitions Bldg., will construct radio station at Washington Barracks; bids until April 10.

Fla., Clearwater—H. C. Brasfield, Mgr., Clearwater Telephone Co., has under construction telephone exchange, install automatic system.

Fla., Kissimmee—Otto Wettstein, Jr., Live Oak, Fla. acquired Kissimmee Telephone System, contemplate immediate improvements.

Ga., Athens—Georgia State College of Agriculture, Andrew Soule, Prest.; install Government radio station.

Tex., Grand Saline—Grand Saline Telephone Co., capital \$25,000, incptd., by Thomas S. McGrain, C. O. and E. L. Dixon.

Va., Richmond—C. A. Sherry, Chief of Police, has plans for installing radio wireless apparatus in police headquarters on Broad St., equipment will have sending distance of 400 mi.

Textile Mills.

Ala., Athens—Spencer, Turner & Co., New York, and others, reported to have purchased Fulton Cotton Mill.

Ala., Montgomery—Chambray Cloth—State, Thos. E. Kilby, Governor, will establish 10,000 spindle mill at Kilby State Prison, to mfr. chambray cloth; monthly capacity 400,000 yds.; entire output to be mfrd. into shirts by the Reliance Mfg. Co., of Chicago, Ill. (See Misc. Factories.)

Ga., Augusta—Towels, etc.—Globe Mfg. Co., install 128 looms; equipment purchased.

Ky., Mayfield—Cassimeres—Mayfield Woolen Mills, M. J. Wright, Gen. Mgr., let contract to X. B. Wickersham and H. B. Wright, both of Mayfield, to construct spinning room; 202x72 ft.; steel and brick; daylight building. (Lately noted to erect building and install 1740 spindles and 20 looms.)

N. C., Rockingham—Cotton—Midway Mills, reported to install 1-story cloth room.

W. Va., Parsons—Blankets—Edw. C. Hall, Prest. Philippi Blanket Mills, Philippi, W. Va. interested in establishing mill.

Water Works.

Aa., Eufaula—City will improve water works; install filtering system. Address The Mayor.

Fla., Miami—City will install water main on portions of 16th, 8th Sts. & 12th Ave.; contemplate extension to various other streets; Mr. Wharton, City Mgr.

Kla., Pensacola—City will extend water works; let contract for 85 tons of 12-in. piping; fire hydrants, etc. Address The Mayor. (Previously noted.)

Ga., Atlanta—Fitzhugh Knox Real Estate Co., install water works in development of 65 acre residential site. (See Land Development.)

Ga., Oakland, City Sta., Atlanta—Realty Sales Corp., Atlanta, will install water works in 100-acre sub-division. (See Land Development.)

La., Houma—City voted \$200,000 bonds for water and purification plant, and electric lights. Address The Mayor. (Lately noted to vote.)

La., New Orleans—City, Sewerage and Water Board, Geo. G. Earl, Gen. Supt., will install additional pumping mch. at water works; 2 boilers of 1500-1800 H. P. capacity each, 2 36-in. pumps and motors; increasing capacity to 100,000,000 gallons per day; cost about \$60,000; bids received; later may increase purification system. (Lately noted.)

N. C., Conover—City, C. R. Brady, Mayor, will construct water works system; install wells, pump, motor, tank, hydrants; about 2 1/2 mi. of 4-in., 6-in. and 8-in. cast iron mains; motor driven plunger pump, 150 gal. per minute; 160 ft. head; 75,000 gal. tank on 90 ft. tower; cost about \$35,000; Spoon & Lewis, Const. Engr., Greensboro, N. C. (Lately noted.)

N. C., Greensboro—City will extend water works; contract let to Lynchburg Foundry Co., Lynchburg, Va. for 790 tons of water pipe at \$36.325; to R. D. Wood & Co., Phila., Pa., at \$2584.80 for fire hydrants; to H. Mueller Mfg. Co., New York, at \$1974 for curb cocks, goose necks and other fittings. (Lately noted.)

N. C., Leaksville—City will construct water system, cost about \$125,000; John W. Webb and E. W. Cole, Civil and Const. Engrs., Salisbury, N. C.

N. C., Lumberton—Town, J. P. Russell, Clk., will extend water and sewer system; 5 1/2 mi. of 1 1/2-in., 6-in. and 10-in. mains for

water works; 500,000 gal. concrete reservoir; 4 mi. of 8-in. to 30-in. sewers; bids until Apr. 18; the Carolina Engineering Co., Engrs., 412 Southern Bldg., Wilmington, N. C.; lately noted. (See Mch. Wanted—Water Works.)

N. C., Morgantown—Town, Otis B. Lackey, Mgr., will install gravity system of water works; lately noted about 12 mi. of pipe line and dam; 10,000,000 gallons daily capacity; estimated cost \$200,000. (See Mch. Wanted—Water Pipe.)

Okl., Wewoka—City receives bids to enlarge water works; dam Wewoka Creek, construct settling basin and install purifiers and chlorinators. Address The Mayor. (Lately noted.)

S. C., Florence—Dargan-Harlee Co. will install water and sewer system in connection with sub-division development. (See Land Development.)

S. C., Walhalla—City Commrs., Geo. Ansel, Chrmn., will construct complete water and sewerage system; cost \$110,000; bids until Apr. 14; Ryan Engineering Co., Engr., 20 Arcade Bldg., Columbia, S. C. (See Mch. Wanted—Water Works.)

Tenn., Memphis—City, let contract to Fuller & McClintock, New York, to construct artesian water works system; cost \$2,000,000. (Lately noted to rebuild and extend water system.)

Tenn., Rossville—City, Roy McFarland, Mayor, will construct water mains to connect with present water system of Chattanooga, Tenn.; voted \$30,000 bonds.

Tex., Cameron—Cameron Water, Power & Light Co., will improve plant; increase capacity; install additional treating plant; cost \$40,000.

Tex., Dallas—Myers & Noyes, Engrs., 1107 Dallas County Bank Bldg., will open bids on constructing about 7000 ft. of water mains and 8500 ft. of tile sewer mains, in Country Club Estates.

Tex., Dallas—City, Fred Appel, Water Commr., will construct temporary water plant at Bachman's Dam; daily capacity 10,000,000 gallons; cost \$6000.

Tex., Groesbeck—City let contract to James Contracting Co., Southland Hotel, Dallas, Tex., to install water system; Henry Exall Elrod Engineering Co., Const. Engr., 3206 Elm St., Dallas. (Lately noted.)

Tex., Port Arthur—City, E. R. Thomas, Clk., will extend pipe lines; 2000 gals. per minute, motor driven centrifugal pump, to pump against 150 ft. head total; will invite bids; N. C. Erwin, City Engr. (Lately noted.)

Tex., Clarendon—City will improve water works; votes Apr. 11 on \$75,000; W. D. Howren, City Engr.

Woodworking Plants.

Fla., Lake City—Barrels—Interstate Coöperation Co., E. P. Waring, Secy., 400 Consolidated Bldg., Jacksonville, Fla. let contract to R. H. House to erect plant; install light mch., all purchased; mfr. split and syrup barrels. (Lately noted to erect first unit of plant.)

Ky., Louisville—Millwork, etc.—Kentucky Lumber and Millwork Co., capital \$25,000, inceptd. by C. A. Christian, W. R. Davis and J. M. Chappell.

Ky., Louisville—Millwork, etc.—Southern Wood Products Co., Geo. Klerer, Jr., Mgr., let contract to C. R. Markert, to erect 70x50-ft. mill building and 30x100-ft. warehouse, brick and construction; mch., all purchased; daily output interior trimmings and general millwork. (Lately noted increased capital to \$100,000.)

Miss., Crystal Springs—Furniture—R. J.

Young has under construction plant to mfr. furniture.

Miss., Lumberton—Truck Bodies—Martin-Parry Corp., York, Pa., will erect 50x35-ft. plant; Edward Hines Lumber Co., Const. Engr.; mfr. commercial bodies, capacity 150 daily. (Lately noted to establish plant.)

N. C., Shelby—Sash, Doors, etc.—E. W. Wilson and J. L. Taylor, both Rutherfordton, N. C., purchased lumber holdings, remodel plant for mfr. of sash doors, mantles, etc.

S. C., Great Falls—Furniture—Clark Plyer Furniture Co., capital \$10,000, inceptd. with M. R. Clark, Prest.-Treas.; C. D. Plyler, V.-P. and Secy.

S. C., Kingstree—Furniture—Williamsburg Furniture Co., capital \$10,000, inceptd. with A. W. Reynolds, Prest.; J. T. Smith, Secy.-Treas.

Tex., Slaton—Furniture—Slaton Furniture Co., capital \$25,000, inceptd. by A. E. Howerston, J. S. Lanham and C. B. Smith.

FIRE DAMAGE

Ala., Liberty—Moses & Hendrix's building.

Ala., Troy—Standard Chemical & Oil Co.'s Mill No. 1; loss \$75,000.

Ala., Winfield—S. W. Bishop & Son, Ernest & Webster, Sizemore & Ward, W. B. Musgrove's stores; Hill Cafe; White's Cafe; loss about \$90,000.

Ark., Jonesboro—Garage of Scott Ice Cream Co.; loss \$10,000.

Fla., Arcadia—Arcadia Lumber Co.'s plant; loss \$50,000.

Fla., Brandon—Lovie Brandon's building. Fla., Laurel Hill—J. H. Givens' barn and dwelling.

Fla., Pass-a-Grille—Sullivan Apartments, loss \$30,000; Leon Backer's cottage, \$5000; cottage owned by Jas. H. Simmons, Niagara Falls, N. Y., \$7000.

Fla., Pineda—Pineda Lumber Co.'s plant; loss about \$250,000.

Ga., Clearfield—Elk Tanning Co.'s plant; loss \$300,000.

Ga., Columbus—Bradley Fertilizer Co.'s plant; loss \$90,000.

Ga., Montezuma—T. R. McKenzie estate, C. L. DeVaughn and W. M. Lewis estate's buildings.

Ga., Moultrie—Huber Lumber Co.'s planing mill and dry kiln; loss \$60,000.

Ga., Shellman—Princess Theater.

Ga., Thomasville—C. L. Thompson's residence.

Ga., Valdosta—J. N. Bray Lumber Co.'s plant; loss from \$50,000 to \$75,000.

Ky., Louisville—W. S. Matthews & Sons' rehandling tobacco plant; loss about \$205,000.

La., Bogalusa—Bogalusa Turpentine Co.'s Turpentine still; loss about \$7000.

Md., Baltimore—Gentlemen's Driving Park clubhouse, Old Pimlico Road and Belvidere Ave.

Md., Baltimore—Victoria Theater, 415 E. Baltimore St., owned by Cohen, Hartz and Gephardt.

Miss., Hattiesburg—M. D. King's residence on Bay St.

Miss., Tutwiler—Harrison Building, owned by R. J. Searcy; loss \$18,000.

Mo., Eugene—Schell Mercantile Co., Bank of Eugene and Thompson Mercantile Store's buildings.

Mo., Harrisburg—Odd Fellow's Lodge Hall.

N. C., Jonesboro—Tinney Inn, owned by Chas. Lawrence; loss \$12,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

N. C., Wilmington—American Cotton Oil Co.'s linter room.

Okla., Enid—Pierce Oil Corp.'s offices and warehouses.

Okla., Grove—George Dawson's mill and elevator.

S. C., Barnwell—E. F. Woodward's residence; B. B. Easterling's residence; J. S. Black's residence.

S. C., Trough—Spinning room of Pacolet Mfg. Co.'s Mill No. 5.

Tenn., South Knoxville—White Oak Corp.'s storage plant; loss \$50,000.

Tex., Houston—Wm. Ware Lumber Co.'s warehouse; Gordon Sewell & Co.'s stables; loss \$50,000.

Tex., Houston—McCardell & Sauer Dry Goods Co.'s building, 1010 Texas Ave.; The Fair Store, B. L. Levinson, Prop., 1103 Congress Ave.

Tex., Huntsville—State Penitentiary buildings. Address The Warden.

Tex., Webster—Humble Oil & Refining Co.'s tanks; loss \$150,000.

Va., Alexandria—Old Dominion Boat Club's building at foot King St.; loss \$16,000.

Va., Danville—R. B. Gentry's garage building; loss \$9,000.

Va., Norfolk—Colonial Cereal Co.'s buildings.

W. Va., Wheeling—St. Vincent's Orphan Asylum, Elm Grove; loss \$10,000.

reinforced concrete; gravel roof; concrete, tile and maple floors; hollow fireproof and interior tile; ornamental terra cotta; metal doors; mail chutes; ventilators; steel sash and trim; wire glass; steam heat, \$4500; 2 electric elevators, 6x6 ft.; E. C. Seiz, Archt.; construction by owner. (See Mch. Wanted—Concrete Mixer; Tower.)

Md., Baltimore—Waldo Hack, St. Paul & Saratoga Sts., will erect fireproof office building at St. Paul and Pleasant Sts., 23x75 ft.; slag roof; tile and concrete floors; hollow fireproof and interior tile; ornamental terra cotta; metal doors; wire glass; mail chutes; steel sash and trim; Wight & Lockhart, Archts., Munsey Bldg., bids opened in about 10 days.

Miss., Tutwiler—R. J. Searcy will rebuild Harrison Building noted burned at loss of \$18,000.

Mo., Poplar Bluff—Poplar Bluff Loan & Building Assn. plans to erect building.

Mo., St. Louis—Union Station Trust Co., R. R. Karraker, Cashier, and St. Louis National Bank plan to erect bank and office building on 18th and Olive Sts.; details not definite.

N. C., Fountain—Bank of Fountain plans to erect building; cost \$15,000 to \$20,000.

N. C., Hickory—First Building & Loan Assn. will erect building; cost \$20,000; 30x90 ft.; 2 stories, basement and mezzanine floor; brick; non-combustible roof; wood and tile floors; Benton & Benton, Archts., Wilson. (Lately noted.)

N. C., Marshall—Bank of French Broad and Marshall Pharmacy will erect building 30x90 ft.; 2 and 3 stories.

Okla., Norman—Norman State Bank, John W. Barbour, Pres., will erect building at Main St. and Peters Ave.; cost \$80,000; reinforced concrete and Bedford limestone; 6 granite columns; interior of walnut and marble.

S. C., St. George—Citizens Bank, Walter D. Utsey, Pres., will erect bank building; 25x80 ft.; lower floor for bank and upper floor for offices; architects invited to submit plans and specifications until April 5. (Lately noted.)

Tenn., Memphis—Central State National Bank, S. E. Ragland, Pres., plans to erect one-story addition on 2nd St.

Va., Richmond—Wm. B. Bates, Engr. and Henry T. Barnham, Asso. Archt., prepared plans for physicians' and dentists' building; cost \$250,000; 7 stories; 4 stores on Second St. and 2 on Franklin; marble vestibule; 6 upper floors, divided into 31 suites.

Va., West Point—Bascom C. Rowlett, Richmond, is preparing plans for bank.

W. Va., Bluefield—First National Bank will erect extension on Main and Scott Sts.; 2 stories; first floor for bank, second for offices.

W. Va., Welch—Drs. Daniel and Hall will erect office and store building; cost \$50,000; 40x70 ft.; fireproof; composition roof; wood and cement floors; steam heat; electric lighting; electric elevator; R. M. Bates, Jr., Archt., Huntington; bids opened. Address Dr. Daniel. (Lately noted.)

Churches.

Ark., Eudora—Presbyterian Church and Baptist Church each plans to erect \$15,000 building; Methodist Church will remodel building; cost \$7500. Address The Pastors.

Ark., Jonesboro—First Methodist Church will erect building; cost about \$200,000 including furnishings; Batesville stone; J. A. Almand, Archt., Little Rock.

D. C., Washington—Cleveland Park Congregational Church will erect community house;

BUILDING NEWS

BUILDINGS PROPOSED

Apartment Houses.

Ark., Texarkana—Dr. L. J. Kosminsky & I. M. Kosminsky will erect 2-apartment flat at 4th and Laurel Sts.; 5 rooms each; stucco.

Ga., Atlanta—E. M. Willingham will erect apartment house, 492 N. Boulevard; 2 stories; brick veneer; cost \$45,000.

Mo., Kansas City—B. G. Mitchell will erect 2 apartment buildings on Mill Creek Parkway near 45th St.; cost \$100,000; 4 stories; 8 apartments of 6 rooms and 2 baths each.

Mo., Kansas City—A. I. Mains will erect apartment house; cost \$17,500; 3 stories; brick. (See Hotels.)

Mo., St. Louis—Mederacke Construction Co. will erect apartment building in Gardenview Terrace. (See Dwellings.)

Tex., Dallas—L. E. Goodloe will erect apartment house at 422 N. Marsalis St.; 20 rooms; brick veneer; cost \$14,000.

Tex., Dallas—S. Kirkgard will erect apartment house at 4300-4 Gaston St.; cost \$20,000; 20 rooms; brick veneer.

Va., Richmond—Bascom C. Rowlett is preparing plans for apartment house at Grove Ave. and Harrison St.

Va., Richmond—Virginia Realty & Construction Co., Inc., will erect apartment house at 3427 Grove Ave.; cost \$25,000; 54x40.6x38 ft.; brick; tin and slate roof; hardwood and pine floors; hot water heat, \$1300; electric lighting; plans and construction by owner; also erecting another apartment house of similar dimensions and cost.

W. Va., Huntington—Fred Lunsford, Supt. of Malls, will erect 2-story brick apartment building at 5th Ave. and 14th St.; cost about \$20,000.

Association and Fraternal.

Fla., St. Petersburg—St. Petersburg Shrine Club plans to erect \$100,000 building; lodge rooms, dance hall, auditorium to seat 1000, restaurant.

La., Shreveport—Scottish Rite Temple plans to erect annex in rear of cathedral to seat about 3500.

N. C., Durham—Masonic Building Corp., will erect building; cost \$250,000; 60x116 ft.; 7 stories; fireproof; steel frame; granite; limestone, brick and hollow fireproof and interior tile; ornamental terra cotta; metal doors; wire glass; steel sash and trim; ventilators; vault lights; mail chutes; 2 elevators; first floor for stores; 5 floors for offices; top floor for lodges; bids opened about May 20. Address Milburn-Helster &

Co., Archts., Union Savings Bank Bldg., Washington, D. C. and Durham.

Tenn., Cookeville—Independent Order Odd Fellows will erect hall on East Spring St.

Tenn., Memphis—Catholic Club Building Assn., E. F. Longinotti, Secy., will receive bids until Apr. 24 to erect building; 97x149 ft.; 6 stories; fireproof; steel frame; concrete, tile and hardwood floors; brick exterior; stone trim; composition roof on concrete slab; hollow fireproof and interior tile; metal ceilings; safes; metal doors; wire glass; vault lights; ventilators; steel sash and trim; low pressure steam modulation heating system; one-passenger elevator and one dumbwaiter. Address Regan & Welser, Archts., 834 Bank of Commerce Bldg. (Lately noted.)

W. Va., Fairmont—Odd Fellows Lodge No. 2, Jno. F. Phillips, Chrmn., Bldg. Comm., will receive bids until Apr. 17 to remodel Grand Opera House at Jackson and Monroe Sts.; 4 stories; 3rd and 4th floors for lodge purposes; business rooms on first floor; plans and specifications at office C. H. Snider, Archt., Professional Bldg.

W. Va., Terra Alta—Knights of Pythias will erect building; cost \$40,000; 70x70 ft.; semi-fireproof; composition roof; wood and concrete floors; hot air heat; electric lighting; electric elevator; bids open about May 15; Richard M. Bates, Jr., Archt., Huntington. (Lately noted.)

W. Va., Wheeling—Ohio Valley Trades and Labor Assembly, 1504-06 Market St. will remodel building, cost \$30,000; third floor for assembly rooms, second for offices and first for billiard hall.

Bank and Office.

D. C., Washington—Mrs. Ellen H. Kirby will erect 2 story fireproof building; reinforced concrete; tapestry brick; limestone trim; granite base; 5 sections, each to contain fireproof vault; Maurice F. Moore and Arthur L. Blakeslee, Asso. Archts.

D. C., Washington—Masonic Mutual Life Insurance Co., will erect office building on Connecticut Ave. and K St., N. W.; 11 stories; fireproof.

Fla., St. Petersburg—Central National Bank will erect 2-story addition to building; Frances J. Kennard, Archt., Tampa.

Ga., Athens—Commercial Bank, Mr. Hugh H. Gordon, Jr., Pres., will improve building on College Ave.; cost \$40,000.

Ga., Atlanta—Massell Realty Co. will erect office and store building at Cain and Spring Sts.; lately noted; cost \$200,000; 70x146 ft.;

cost \$40,000; 2 story; stone; Clarence L. Harding, Archt., 729 15th St. (Lately noted.)

Fla., Lake Wales—Baptist Church will erect building to seat 500 on Central Ave.; Colonial; cost \$25,000; H. L. Cain, Archt., Richmond, Va. (Previously noted.)

Fla., Lake Wales—Baptist Church plans to erect church building, Colonial type; cost about \$25,000. Address The Pastor.

Fla., St. Petersburg—Jack Taylor plans to erect church between Central Ave. and Country Club, Pasadena-on-the-Gulf.

Ga., Athens—First Baptist Church will erect \$20,000 building; Baskerville & Lambert, Archts., Richmond, Va.

Ga., Decatur—Methodist Church, Rev. G. M. Eakes, Pastor, plans to erect Sunday School to seat 1000.

La., New Orleans — St. James' Catholic Church, Father M. H. Chauvin, Pastor, will erect church and parochial school in Gentilly Terrace section; cost \$50,000.

Md., Baltimore — Huntington Baptist Church will erect \$40,000 building; 2 stories and basement; brick with limestone trimmings; auditorium about 600 capacity; H. L. Cain, Archt., Richmond, Va.; bids opened about Apr. 10. (Lately noted.)

Miss., Canton—M. E. Church, South, Rev. H. A. Gatlin, Pastor, will erect building; cost about \$60,000; brick; stone trim; tile roof; auditorium and Sunday school to seat 600 each; Raymond B. Spencer, Archt., Memphis, Tenn.

Miss., Oxford—Methodist Episcopal Church, Rev. L. M. Lipscomb, Pastor, plans to erect \$60,000 building.

Mo., Bolivar—Christian Church will erect building; cost \$40,000; pressed brick. Address The Pastor.

Mo., Columbia — Evangelical Lutheran Church will erect building; cost \$15,000; stone foundation and super-structure; cut stone trim; Ludowici Spanish tile roof; art glass; organ reserved; bids opened about April 15; A. Meyer, Archt., Central Nat. Bank Bldg., St. Louis. (Previously noted.)

Mo., Higginsville—Lutheran Church will erect building; cost \$15,000; brick veneer faced with matt brick and terra cotta trim; concrete foundation; slate or asbestos roof; art glass; organ not in general contract; A. Meyer, Archt., Central Nat. Bank Bldg., St. Louis. (Previously noted.)

Mo., Kansas City—Guardian Angel Catholic Church, Rev. P. P. Rosch, Pastor, will erect building; cost \$150,000; basement completed at cost of \$25,000; Carthage (Mo.) rock-broken ashler; Gothic architecture with tower in rear; H. W. Brinkman, Archt., Emporia, Kan.; construction by day labor. (Previously noted.)

Mo., Lebanon—Baptist Church will erect building; cost \$15,000. Address The Pastor.

Mo., St. Louis—Ebenezer Lutheran Church, Rev. Arthur Kuehnert, Pastor, will erect building, Church and Theobald Aves.; cost \$50,000; brick; seating capacity 550; Arthur Kilz, Chrmn., Bldg. Comm.

N. C., Charlotte—First Baptist Church, Rev. Luther Little, Pastor, will erect building; cost \$90,000; 80x70 ft.; brick; wood and concrete floors; steam heat; city lighting; J. M. McMichael, Archt. (Previously noted.)

N. C., Charlotte—Pritchard Memorial Baptist Church, Rev. W. A. Smith, Pastor, will erect addition to building.

N. C., Durham—First Presbyterian Church will erect \$50,000 church house; 45x90 ft.; 2 stories; tapestry brick; slate roof; rift pine floors; steam heat; electric lights; hollow fireproof tile; safes; interior tile; vaults;

ventilators; club room, apartments, offices and recreation rooms; Baskerville & Lambert, Archts., Richmond, Va.; contract let about Apr. 10. Address D. H. Scanlon, Chrmn., Durham. (Previously noted.)

N. C., Hickory—First Baptist Church will enlarge building; Rev. W. R. Bradshaw, Pastor.

N. C., Murfreesboro—Baptist Church will erect building; cost \$35,000; 3 stories; face brick; Greek design; Herbert L. Cain, Archt., Richmond, Va.; bids opened. (Lately noted.)

N. C., Rutherfordton—Baptist Church will erect building; cost about \$25,000; brick with stone trimming; asbestos or corrugated roofing; wood floors; hot air heat; electric lighting; metal ceilings; James E. Greene, Archt., Birmingham, Ala. (Lately noted.)

N. C., Winston-Salem—Southside Baptist Church, Rev. V. M. Swain, Pastor, will erect building; cost \$50,000 to \$60,000; brick and stone; slate roof; steam heat; rolling partitions; C. Gilbert Humphreys, Archt. (Previously noted.)

Okla., Hydro—Catholic Church will erect building to replace recently burned structure; cement and stucco. Address The Pastor.

Okla., Hydro—Methodist Church will erect \$35,000 building. Address The Pastor.

S. C., Greenwood—Methodist Church will erect Sunday school building; 2½ stories with basement above ground; 58x100 ft.; auditorium to seat 600 or 800. Address The Pastor.

S. C., Greer—First Baptist Church, Rev. Porter M. Bailes, Pastor, will erect building; cost \$50,000.

S. C., Spartanburg—First Baptist Church plans to erect Sunday school building to seat 2500. Address The Pastor.

Tenn., Knoxville — Island Home Baptist Church, Rev. R. B. Jones, Pastor, will erect building; cost \$40,000 or \$50,000; 50x100 ft.; Sunday school in basement; brick walls; auditorium to seat about 500; balcony; columns at entrance; Ryno & Brackney, Archts.; John R. Gilbert, Chrmn. Bldg. Comm.; plans ready about May 1. (Previously noted.)

Tenn., Maryville—First Methodist Episcopal Church, Rev. G. T. Francisco, Pastor, will erect building; cost about \$50,000.

Tenn., Memphis—Bellevue Baptist Church, Rev. W. M. Bostick, Pastor, plans to erect building to accommodate 1200 to 1500; R. B. Spencer, Archt., Goodwyn Institute Bldg. (Previously noted.)

Tex., Austin—African M. E. Church, Rev. S. D. Butler, Pastor, will erect building; cost \$26,000; auditorium to seat 400; brick; shingle roof; gas radiation, \$900; city lighting; Gliesecke & Harris, Archts., Littlefield Bldg.; bids opened. (Lately noted.)

Tex., Dallas—Church of Christ, Llewellyn and Center Sts., will erect brick and frame church; cost \$15,000. Address The Pastor.

Tex., Dallas—Oak Cliff Church of Christ, Rev. G. Mitchell Pullias, Pastor, will erect addition; cost \$15,000; H. A. Fisher, Chrmn. Bldg. Comm.

Tex., Houston—Woodland Heights Baptist Church, Rev. Chas. S. Rush, Pastor, will erect \$50,000 church.

Tex., Victoria—Our Lady of Lourdes Catholic Church, Father Lawrence Etschenberg, Pastor, will erect building at N. Williams and E. Forrest Sts.

Va., Abingdon—Green Spring Presbyterian Church, Rev. Dan Graham, Pastor, will erect building near Abingdon; cost \$18,000; 50x90-ft.; brick veneer; concrete foundation; metal slate roof; hardwood and concrete floors; rolling partitions; hot air heat; Delco lights; Burnett, Dixon & Burnett, Archts., Bristol, Tenn.; bids opened. (Lately noted.)

Va., Lynchburg — College Hill Baptist Church, Rev. A. B. Conrad, Pastor, will erect Sunday School building at 11th and Floyd Sts.; 22x66 ft.; 2 stories and basement; room for men's Bible class to accommodate 350. (Lately noted.)

Va., Richmond—St. Thomas' Church, Ginter Park, will erect Sunday school building; cost about \$26,000; 72x42 ft.; granite; Tudor style; Lee & Lee, Archts.

Va., Suffolk—Oxford M. E. Church, South, Rev. F. B. Oglesby, Pastor, will erect \$35,000 building; 60x100 ft.; brick and stone; tile or metal roof; stone towers; hardwood and concrete floors; metal ceilings; plaster board; ornamental terra cotta; wireglass; ventilators; Beryl Riddick, Jr., Archt. (Previously noted.)

Va., Woodstock—Christian Church will erect building on Muhlenburg St. Address The Pastor.

W. Va., Beckley—First Presbyterian Church will erect \$75,000 building; 60x120 ft.; semi-fireproof; face brick; stone trim; composition roof; wood floors; hot air heat; Sunday school and main auditorium on first floor; kitchen, gymnasium, etc., in basement; Richard M. Bates, Jr., Archt., Huntington; bids opened. (Lately noted.)

W. Va., Chelyan—Chelyan M. E. Church will erect building; Colonial design; cost \$45,000; 2 stories and basement; Herbert S. Kyle, Archt., 500-02 Union Trust Bldg., Charleston, W. Va.; day labor. (Lately noted.)

City and County.

Ala., Huntsville—Almsouse — Board of Revenue of Madison County will erect alms house near Huntsville.

Ky., Livermore—City Hall—City will erect city hall, jail and fire-truck building; A. Killian, Archt., 519 St. Ann St., Owensboro.

La., Shreveport—Library—City will erect library on Travis and Edwards Sts., also erect courthouse and jail on Cotton and McNell Sts. Address Board of City Comrs.

La., Shreveport—Fire Station—City, J. C. Flanagan, Secy.-Treas., City Hall, will receive bids until Apr. 11 to erect central fire station; cost \$100,000; 2 stories; 85-ft. frontage; plans and specifications at office Clarence W. King, Archt., First National Bank Bldg., and office Mr. Flanagan. (Lately noted.)

N. C., Thomasville—Fire Station—City will erect fire station. Address Board of Fire Commissioners.

Va., Norfolk—Market—City will receive bids until Apr. 11 to erect \$300,000 market; 250x150 ft.; 2 stories and basement; reinforced concrete; Barrett roof; tile and concrete floors; 2 freight elevators; hollow fireproof tile; ornamental terra cotta; metal doors; interior tile; wire glass; steel sash and trim; B. F. Mitchell, Archt., 500 Seaboard Bank Bldg. (Previously noted.)

Va., Roanoke—City will erect fire station in Raleigh Court; cost \$15,000 to \$18,000.

Dwellings.

Ark., Eudora—C. L. Thompson plans to erect residence; cost about \$10,000.

Ark., Pine Bluff—Mrs. Ernestine Norris plans to erect residence on Oak St. and Twelfth Ave.

D. C., Washington—H. A. Kite will erect residence at 1828 Lawrence St.; cost \$50,000; 2 stories; construction by owner.

D. C., Washington—C. H. Small will erect residence at 4828 16th St., N.W.; cost \$20,000; 2½ stories; also erect 10 2-story dwellings on Cathedral Ave.; cost \$70,000; construction by owner.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Fla., Bradenton—J. K. Singeltary will erect dwellings in colored section; also in sub-division east of country club.

Fla., Palm Beach—Addison Mizner, Archt., plans to erect 2 dwellings on Palm Beach Island near Croker House.

Fla., St. Petersburg—Judge Freeman P. Lane will erect residence at Pasadena-on-the-Gulf.

Fla., St. Petersburg—Jack Taylor will erect residence at Pasadena-on-the-Gulf.

Ky., Ashland—Rogers Bros. will erect number of dwellings; various dimensions; stucco, brick, tile, etc.; asphalt shingle roofs; wood floors; electric lighting; R. M. Bates, Jr., Huntington, W. Va. (Lately noted.)

Ky., Louisville—Model Home Construction Co. will erect 3 dwellings at 1933-37 Richmond Ave.; cost \$3500 each.

Ky., Louisville—George Panks will erect 5 dwellings at 838-46 South Thirty-third St.; cost \$25,000 each.

Ky., Owensboro—Dr. Ed Barr will erect 2 story brick veneer residence on 7th St. between St. Ann and Allen Sts.; A. Killian, Archt., 519 St. Ann St.

Ky., Pathfork—Black Star Coal Co., B. F. Leeds, Gen. Mgr., 315 Guthrie St., will erect about 300 miners' cottages; frame, construction by owner.

La., New Orleans—Henry Hecker will erect residence at 2928-28 Cambonne St.; cost \$10,000; construction by owner.

La., Shreveport—Dr. R. H. Blackman will erect 2 one-story frame stucco dwellings and garages at 828-832 Kings Highway; cost \$10,000.

Md., Baltimore—Builders' Trade Assn., Inc., 2 E. Lexington St., will erect 14 two-story brick dwellings, 301-327 Singer Ave.; total cost \$38,000; 19x30 ft.; D. M. Reed, Archt.

Md., Baltimore—Callow Park Development Co., 1318 Fidelity Bldg., will erect 6 three-story duplex dwellings, Callow Ave.; brick; cost about \$50,000.

Md., Baltimore—Montebello Park Co., 11 E. Fayette St., will erect 3 one-story frame dwellings, Overland and Maine Aves.; 26x31 ft.; cost \$7500; also one-story frame dwelling at Overland and N. Upland Aves.; 26x31 ft.; cost \$2500; Geo. Wessel, Archt., 2752 Winchester St.; construction by owner.

Md., Baltimore—Geo. W. Schoenhals, 101 S. Linwood Ave., will erect 5 two-story brick dwellings 1535-43 Poplar Grove St.; four 15.6x55ft.; one 17x56 ft.; slag roofs; hot water heat; cost \$12,500; Jos. F. Hirt, Archt., 829 N. Luzerne Ave.; construction by owner. (Lately noted.)

Md., Baltimore—Andrew L. Blankner, 1740 E. 25th St., will erect 3 bungalows on Tyndale Ave., near Canterbury La.; cost \$10,000; 1½ stories.

Md., Baltimore—Nathan Rosenstadt, 4234 Park Heights Ave., and Isidor Rosenstadt, 1701 Moreland Ave., will erect 4 brick dwellings and stores on Park Heights Ave. near Allen Ave.; cost \$15,000; 2 stories.

Md., Baltimore—Dr. J. Staige Davis, Severn Apts., will erect residence on Wendover Rd., Guilford; 61x34 ft.; 2½ stories; stone and weatherboarding; 15 rooms and 5 baths; Parker, Thomas & Rice, Archts., Union Trust Bldg.; bids opened.

Mo., Kansas City—J. C. Nichols Investment Co. purchased 230-acre site of 65th St., east of Wornall Rd. and will erect number of bungalows in connection with development providing sites for churches, stores, schools, etc.

Mo., Kansas City—Carl A. Nilson will erect dwellings at 4426-28-30-32 Chestnut Ave.; cost \$3000 each.

Mo., Kansas City—Fidelity Building Co. will erect dwellings at 4417-19-21 Woodland Ave.; cost \$2000 each; 4235-39-41 Benton Blvd.; cost \$3000 each; 5546-50 Central St.; cost \$7500 each.

Mo., Kansas City—Fred W. Zurn, 126 Wirthman Bldg., is erecting 65 residences. (Lately noted in part.)

Mo., Kansas City—T. H. Michaels, 633 W. 62nd St., will erect dwelling; cost \$11,000.

Mo., Kansas City—A. E. Sharp will erect dwellings at 4242 Bellfontaine and 4133 Agnes Ave.; cost \$3000 each; 5623 and 5625 Cherry St.; cost \$4000 each.

Mo., St. Louis—Mederacke Construction Co. will erect 2 bungalows and 1 flat in Gardenville Terrace; cost \$27,000.

N. C., Sanford—E. L. Gavin plans to erect \$20,000 residence on Hawkins Ave.

N. C., Sanford—J. T. Ledwell plans to erect \$10,000 residence in East Sanford.

S. C., Columbia—Fred S. Campbell, 908 Pickens St., will erect residence lately noted; cost \$18,000; 40x50 ft.; brick and hollow tile; tile roof; oak and pine floors; hot water heat; electric lighting; A. W. Hamby, Archt.; construction by owner. (See Mch. Wanted—Flooring (Hardwood); Tile.)

Tenn., Memphis—O. E. Bass will erect dwellings at 403 Dickinson St.; 6 rooms; brick veneer; cost \$4500; also two 6-room dwellings, 1143-1147 Tutwiler St.; brick veneer; cost \$4250 each.

Tenn., Memphis—J. A. Haley will erect two 6-room dwellings, 1624 and 1630 Vance St.; brick veneer; cost \$4500 each; also four 5-room dwellings, 1639, 1640, 1645, 1649 Vance St.; brick veneer; cost \$4500 each.

Tenn., Memphis—J. R. Ellis, 632 Goodwyn Institute, will erect three bungalows; cost \$2000 each; 28x40 ft.; 5 rooms; brick; slate surfaced composition roof; oak and pine floors; hot water heat; plans and construction by owner. (Lately noted.)

Tenn., Memphis—R. M. Rhodes will erect dwelling, 269 Parkview St.; cost \$24,000; 10 rooms; brick veneer.

Tenn., Memphis—Mrs. Ellen Strong will erect dwelling at 1604 Eastmoreland St.; cost \$11,700; brick veneer; 12 rooms.

Tenn., Memphis—N. H. Willman will erect dwelling at 1883 Autumn St.; cost \$11,000; 8 rooms; stucco.

Tenn., Warburg—Emory River Lumber Co. will erect residence in Emory Addition.

Tex., Austin—Dr. F. C. Gregg will erect residence in Enfield addition; cost about \$16,000; hollow tile walls stuccoed; asbestos shingle roof; oak and concrete floors; metal doors; hot water heat about \$900; city lighting; Glesecke & Harris, Archts., Littlefield Bldg.; bids opened about May 1. (Lately noted.)

Tex., Dallas—J. S. Beauchamp will erect two 7 story brick veneer cottages at 5518-19 Belmont St.; cost \$6,500 each.

Tex., Dallas—S. F. Davis will erect six room frame cottage at 5603 Belmont St.; cost \$6000; two 6 room frame cottages 5518-19 Bonita St.; cost \$4500 each.

Tex., Dallas—J. A. Heiskell will erect six 4 room frame cottages on West Brooklyn St.; cost \$1500 each.

Tex., Dallas—Roy Jenkins will erect 8 room brick veneer residence; 5316 Live Oak St.; cost \$10,000.

Tex., Dallas—Security Home Co., will erect four 6 room frame cottages on Bonita St.; total cost \$11,600.

Tex., El Paso—N. F. Tidwell, Community Milling Co., will erect 18-room building and store at Bassett Ave. and Eucalyptus St.,

first unit of \$20,000 tenement group contemplated; Orndorff & Raynaud, Archts.

Tex., El Paso—J. E. Bischoff will erect rooming house, block 16, Cotton addition; 20 rooms; cost \$10,000.

Va., Appalachia—Dr. J. G. Botts will erect \$10,000 residence; brick and hollow tile; asbestos shingle roof; white oak and rift pine floors; interior tile; wire glass; hot water heat; electric lighting. Address R. B. McGeehin, Archt., Big Stone Gap.

Va., Richmond—Henry S. Hutzler will erect residence on Monument Ave. between Meadow and Allison Sts.

Va., Richmond—Chas. A. Saelzer will erect number of dwellings on North Side.

Va., Richmond—Walter Schaaf, Westhampton, is erecting eight dwellings on West Broad St. beyond Belt Line R.R.; brick; seven rooms; five dwellings on Auburn Ave. between Main St. and Westhampton Ave.; seven rooms; brick; apartment house at Auburn and Westhampton Ave., five dwellings on Fifth Ave., Highland Park and two on Fourth Ave.

Va., Richmond—Jack Parrish will erect residence at Westhampton; about 20 rooms; Baskerville & Lambert, Archts.

W. Va., Bluefield—Irvin Evans will erect 2-story brick residence on 4th St. and Straley Ave.

W. Va., Bluefield—A. T. Crockett, of W. M. Ritter Lumber Co., Huntington, will erect residence in Grove Heights addition.

W. Va., Bluefield—Dr. C. M. Scott will erect residence on Oakhurst Ave.

Government and State.

Tex., Fort Sam Houston—Psychiatric Building—Constructing Quartermaster will erect psychiatric ward building; bids opened;

Hospitals, Sanitariums, Etc.

Ala., Mobile—Treasury Dept., Jas. A. Wetmore, Act. Supervising Archt., Washington, D. C. will receive bids until April 18 for steam heating system, plumbing and wiring at U. S. Marine Hospital, plans and specifications from office of Custodian, Mobile and office Supervising Archt.

Ala., Tuskegee—Treasury Dept., Jas. A. Wetmore, Act. Suprv., Archt., Washington, D. C. will receive bids until May 1 to erect 26 buildings for U. S. Veterans Hospital; separate bids for mechanical equipment except elevators and lighting fixtures; plans and specifications at office Supervising Archt.

Fla., Jacksonville—Board of Tuberculosis Comsn. of Duval County, Dr. H. H. McGlenn, Chrmn. will receive bids until April 17 at office of H. J. Klutho, Archt., 401 St. James Bldg., to erect Sanatorium and Service building; separate bids for general construction and heating.

Ga., Atlanta—Executors of Albert Steiner Estate plan to erect \$100,000 annex to Grady Hospital.

Mo., Marshall—Missouri Colony for Feeble Minded will erect custodial building; cost \$115,000; bids opened April 12.

N. C., Charlotte—St. Peter's Hospital will erect addition; cost about \$75,000; 4 stories; nurses home, maternity ward, baby's ward, children's ward, two additional operating rooms; fireproof; Louis H. Asbury, Archt. (Lately noted.)

Tenn., Knoxville—Dr. R. DeWitt MacDonald will erect hospital on Central Ave.; 60x40 ft.; 3 stories; 30 rooms; cut stone; construction to begin April 5.

Hotels.

Ark., Conway—Robt. B. Oliver, Pres., Oliver Construction Co., Little Rock, will erect hotel; cost \$75,000; 100x140 ft.; 3 stories and mezzanine; brick; 50 rooms, 30 of which will have private baths; 4 stores, lobby and dining hall on first floor; Sanders & Ginnochio, Archts.; construction to begin about Apr. 15. (Previously noted.)

Fla., Plant City—C. T. Young, Wm. Schneider and others plan to incorporate company and erect \$100,000 hotel.

Fla., Tallahassee—Chamber of Commerce is promoting erection of 100-room hotel.

Fla., Windermere—Mrs. Elizabeth Marsh, Orlando, plans to erect hotel on shores of Lake Butler; cost \$50,000; L shape; tile and stucco; private baths; also plans to establish electric plant at hotel which will furnish light and power for village.

Ga., Augusta—J. B. White Estate, Alexander & Garrett, Local Agts., is reported to erect \$600,000 hotel; 175 rooms; G. Lloyd Preacher & Co., Archts.

Mo., Kansas City—A. I. Mains will erect hotel and store building at 1301 Woodland Ave.; cost \$17,500; 4 stories; also apartment house at 1807 E. 13th St.; cost \$17,500; 3 stories; brick.

N. C., Albemarle—W. C. Fitzgerald will erect hotel at North and N. Second Sts.; 103x97 ft.; 5 stories; 40 rooms; 4 store-rooms on first floor; brick; ornamental terra cotta; hardwood and concrete floors; plaster board; interior tile; wire glass; ventilators; safes; 40x40 ft. lobby with marble or tile floors; bids opened April 3; Louis Asbury, Archt., Charlotte. (Lately noted.)

N. C., Blowing Rock—W. M. Alexander, Charlotte, and associates will erect hotel at Mayview Resort; cost \$200,000; Blythe & Isenhour, Charlotte, are estimating.

N. C., Wrightsville Beach—Capt. Edgar Hinton will erect New Seashore Hotel; cost \$50,000.

Tex., Mercedes—F. B. Mitchell, Prop., Palace Hotel, will erect 2-story structure; cost \$42,000; 30 rooms.

W. Va., Shinnston—Shinnston Hotel Co., R. S. Johnson and others, will erect hotel, store and office building; cost \$75,000 to \$100,000; 2 stories; 70x80 ft.; brick; bids opened April 15; Carl Reger, Archt.; Tracton Bldg., Morgantown. (Previously noted.)

Miscellaneous.

Ala., Troy—Orphanage—Baptist Orphanage Commission will erect several buildings; Frank Lockwood, Archt., Montgomery.

Ark., Little Rock—Clubhouse—Co-operative Club, W. H. Laubach and others, will erect clubhouse near Little Rock.

Md., Catonsville—Orphanage—German General Orphan Asylum, 224-42 Aisquith St., Baltimore, will erect several cottage units, each to accommodate 20; central dining room and assembly building, central heating plant and laundry building; cost \$200,000 to \$250,000; concrete foundations; veneered brick on lower portion; upper portion, solid brick; slate roofs; combination tile and concrete floors; fireproof; Walter M. Gleske, Archt., 65 Gunther Bldg.; bids on general contract until April 10; sub-bids until April 7. (Previously noted.)

Mo., Kansas City—Clubhouse—Swope Park Golf Club will receive bids until April 13 to replace structure lately noted burned; cost \$30,000 to \$35,000; 2 stories; Spanish tile roof; 525 lockers; Shepard & Wiser, Archts., R. A. Long Bldg.

Mo., Sedalia—Fair—Missouri State Fair Assn. will erect swine pavilion; cost \$125,000; bids opened April 8; T. W. Bast, Archt. (Lately noted.)

Okla., Oklahoma City—Clubhouse—Rotary Club will erect clubhouse; cost \$12,000; 2 stories; 79x40 ft.

Tex., Abilene—Clubhouse—Abilene Country Club will erect building; cost \$30,000; wading pool, 60x120 ft., swimming pool, etc.

Tex., Beaumont—Market—W. P. Oldham will expend \$21,000 to remodel dwelling at Park and College Sts. for market.

Va., Lynchburg—Clubhouse—Fort Hill Club will erect clubhouse with alcoves for library and museum; also kitchenette, 2 dressing rooms, etc.; clappboards or soft green stone; Stanhope S. Johnson, Archt., Lynchburg.

Va., Richmond—Clubhouse—Commonwealth Club, L. R. Paeg, Chrmn. Bldg. Comm., will erect addition to clubhouse; cost \$110,000; ballroom, gymnasium, swimming pool and 15 bedrooms; Baskerville & Lambert, Archts., Travelers' Bldg. (Lately noted.)

Railway Stations, Sheds, Etc.

Ky., Pikeville—Chesapeake & Ohio R. R., F. I. Cabell, Ch. Engr., Richmond, Va., will erect station; cost \$80,000.

Tenn., Tullahoma—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, will erect office building at Atlantic and Polk Sts.

Schools.

Ala., Anniston—City Board of Education will erect grade school; 6 class rooms and assembly room; brick and concrete; wood floors; steam heat; bids opened April 4; separate bids for heating, plumbing and electrical work; plans and specifications at office; Lockwood, Poundstone & Billie, Archts., 203 Commercial Natl. Bank Bldg. (Previously noted to have voted \$50,000 bonds.)

Ala., Brundidge—County Board of Education, Troy, called election Apr. 10 to vote on tax to erect school for consolidated school district, composed of Pronto, DuBose, Hilliard's Cross Roads, Pea River and Brundidge schools; cost \$40,000 to \$50,000; brick.

Ala., Gadsden—City voted \$250,000 bonds to erect high school and erect additions to present structures; J. H. Disque, Chrmn., Board of Education. (Lately noted.)

Ala., Greenville—Butler County Board of Education will erect high school; cost \$40,000 to \$50,000.

Ark., Beebe—Board of Education, P. R. Gunthart, Supt., will erect school to replace structure recently burned at loss of \$50,000.

Ark., Fort Smith—Chas. W. Dawson, Archt., 201 Merchants Natl. Bank Bldg., and C. J. Tidwell, Secy., Board of Education, will receive bids until April 8 to erect school; cost \$70,000; bids as a whole and separately on plumbing and heating; plans and specifications at office architect either at 201 Merchants Natl. Bank Bldg., Fort Smith, or 207 Barnes Bldg., Muskogee, Okla. (Lately noted.)

Fla., Miami—Board of Public Instruction will erect Hollywood School, Madison and Monroe Sts.; Spanish design; 1 story.

Fla., Oviedo—Seminole County Board of Public Instruction, Sanford, will erect school; bids opened Apr. 4; F. H. Trimble, Archt., Orlando. (Lately noted.)

Fla., Tampa—Hillsborough County Board of Public Instruction, J. E. Knight, Secy., will erect B. C. Graham Grammar School; cost \$75,000; 2 stories; 72x162 ft.; 16 class-

rooms; also erect addition to Gary School; cost \$15,000; two wings, 26x40 ft. each; 3 stories; both buildings brick; terra cotta trim; wood floors; built up composition roof; gas steam heat; electric lights; bids opened; M. Leo Elliott, Archt. (Lately noted.)

Fla., West Palm Beach—County Board of Public Instruction will call election in School Dist. No. 1 to vote on \$200,000 bonds to erect \$150,000 high school, etc.

Ga., Athens—City, Geo. C. Thomas, Mayor, is considering issuing \$200,000 bonds for school buildings. (Previously noted.)

Ga., Atlanta—Fulton County Board of Education, J. W. Simons, Pres., will call election May 9 on \$500,000 bonds to erect 32 schools and improve present structures.

Ga., Omega—Omega School Dist. will vote April 6 on \$15,000 bonds to erect school.

Ky., Ashland—Board of Education, P. D. Wells, Secy., will receive bids until April 18 to erect grade school in Pollard; 12 classrooms, auditorium, gymnasium, domestic science and manual training department; also for building at Oakview; 16 classrooms, auditorium, gymnasium, domestic science and manual training department; both structures fireproof; composition roof; hardwood and concrete floors; steel sash and trim; metal doors; wire glass; hot air heat; plans and specifications at office Albert F. Klein, Archt., 20 Gaylord Bldg. (Lately noted.)

Ky., Fulton—Board of Education, I. H. Read, Chrmn., will receive bids until May 2 to erect high school; 112x63 ft.; 2 stories and basement; plans and specifications at office W. H. Spradlin, Archt.

Ky., Louisville—Board of Education, Samuel D. Jones, Bus. Director, 8th and Chestnut Sts., will receive bids until April 10 for additions and alterations, plumbing and electrical work at Henry Clay School; plans and specifications at office Mr. Jones; Edgar A. Rassiner, Archt. (Previously noted.)

La., Baton Rouge—East Baton Rouge Parish School Board will erect Dufrocq Street School; cost \$90,000; fireproof; 20 rooms; joist construction; composition roof; wood and tile floors; steam heat; electric lights; bids opened Apr. 3; Wm. T. Nolan, Archt., Canal Commercial Bank Bldg., New Orleans. Address Robt. E. Hart, Baton Rouge. (Lately noted.)

La., Baton Rouge—Louisiana State University and Greater Agricultural College, Dr. W. R. Dodson, Dean, will dairy barn, first unit to be erected 2 mi. from Baton Rouge; brick; accommodate 50 cows; Loudon McHy, Co., Archts.

La., New Orleans—Orleans Parish School Board, Nicholas Bauer, Secy., will receive bids until April 14 to erect Audubon School on Broadway between Ann and Irma Sts.; 16 classrooms; ordinary construction; tile and composition roof; pine floors; hot water heat; sprinkler system; plans and specifications at office E. A. Christy, City Archt., Room 25, City Hall Bldg. (Lately noted.)

Miss., Leakesville—Board of Trustees, Greene County Agricultural High School, E. L. Turner, Secy., will erect dormitory; 2 stories; brick or hollow tile; accommodate 60 students; bids opened Apr. 3; plans and specifications from I. E. Peebles, Supt. (Lately noted.)

Mo., Cape Girardeau—Southeast Missouri State Teachers' College Board of Regents will receive bids until Apr. 12 to erect training school; separate bids for heating; semi-fireproof; slate roof; hollow fireproof and interior tile; hardwood and concrete floors; rolling partitions; probably ornamental terra cotta; plans and specifications at office Study & Farrar, Archts., 1363 Arcade Bldg., St. Louis. (Previously noted.)

Mo., Kansas City—Lathrop School, 13th and Wyandotte Sts., will erect 2-story addition consisting of workshops, auditorium and gymnasium; cost \$57,000; built by government vocational students.

Mo., Mexico—Hardin College, E. A. Shannon, Chrmn. Comm., will erect dormitory; cost \$100,000; 200x40 ft.; concrete, brick and hollow fireproof tile; concrete roof; probably metal ceilings; interior tile; hardwood and concrete floors; 2 or 3 metal doors; steel sash and trim; wire glass; rolling partitions; electric lights; ventilators; steam heat; Bonsack & Pierce, Archts., Laclede Gas Light Bldg., St. Louis. (Lately noted.)

Mo., Versailles—School Board, Samuel Daniels, Secy., will erect grade school; cost \$22,000; 54x74 ft.; 2 stories and basement; concrete and brick; metal roof; wood floors; bids opened. (Lately noted.)

N. C., Altamahaw—School Board will erect Hub High School between Altamahaw and Ossipee; contract let April 22; \$50,000 bonds sold.

N. C., Charlotte—St. Peter's Catholic Church will erect convent; Gothic architecture; 2 stories; brick; bids opened.

N. C., Cullowhee—Cullowhee Normal & Industrial School will erect girls' dormitory lately noted; cost \$100,000; about 60x236 ft.; fireproof; steel frame; metal lumber; face brick; Imperial green Spanish tile roof; white oak and concrete floors; interior tile; ornamental terra cotta; metal doors; ventilators; vapor steam heat; G. Murray Nelson and Thos. W. Cooper, Archts., Raleigh; bids opened. Address H. A. Underwood, Engr., Joint Bldg. Commission, Raleigh. (See Mehy. Wanted—Metal Lumber; Hollow Tile; Kitchen Equipment.)

N. C., Kernersville—School Board will erect addition to building; cost \$20,000; 54x80 ft.; brick walls and wood joists; tar and gravel roof; rift pine and concrete floors; ventilators; steam heat; electric lights; W. C. Northup, Archt., 617 Wachovia Bank Bldg., Winston-Salem; bids opened. (Lately noted.)

N. C., Lexington—Lexington; Erlanger and several adjacent districts will probably vote in May on \$225,000 bonds to erect high school. Address County Board of Education. (Previously noted.)

N. C., Lexington—Emmons Township No. 3 will vote April 18 on bonds not to exceed \$30,000 to erect school buildings; Address Davidson County Board of Education.

N. C., Lincolnton—Board of Trustees, Dr. I. R. Self, Chrmn., will receive bids until April 10 to erect 2 schools; plans and specifications at office Board of Trustees, Lincolnton, and office Jas. A. Salter, Archt., Raleigh, also Chamber of Commerce, Charlotte; obtainable from architects. (Previously noted.)

N. C., Raleigh—North Carolina State College of Agriculture and Engineering, Dr. W. C. Riddick, Prest., will receive bids until Apr. 12 to erect addition to dining room; separate bids for heating and plumbing; 60x144 ft.; 1 story; brick; slate roof; composition floors; metal ceilings; plans and specifications at office G. Murray Nelson and Thos. W. Cooper, Archts., Commercial Bank Bldg. (Lately noted.)

N. C., Raleigh—Wake County Board of Education consolidated district comprising New Hill, Bensal and Sloan and will erect school; 6 classrooms and auditorium.

N. C., Rock Ridge—Board of Education, C. L. Coon, Supt., Wilson, will erect \$75,000 school at Rock Ridge; 16 rooms with auditorium; brick and hollow tile; Barrett 20-year roof; rift pine and concrete floors; metal doors; vaults; ventilators; steel and sash

trim; steam heat; also erect 3 rural schools in Wilson County; cost \$25,000 each; 6 rooms and auditorium; non-fireproof; bids opened. Address C. C. Wilson, Archt., Wilson. (Lately noted.)

N. C., Rockingham—School Board, L. J. Bell, Secy., will erect high school; 17 rooms, auditorium and library; hollow fireproof tile; slate roof; hardwood floors; interior tile; metal ceilings and doors; ornamental terra cotta; wire glass; safes; bids opened Apr. 6; drawings and specifications at office Chas. C. Hook, Archt., Charlotte, N. C.; separate bids for heating and ventilating as per drawings and specifications by Wiley & Wilson, Lynchburg, Va. (Previously noted.)

N. C., Sanford—Sanford School Dist. Trustees will erect addition to East Sanford School; slow burning construction; brick exterior; Barrett roof; steam heat; C. Gadsden Sayre, Archt., Anderson, S. C. (Lately noted.)

Okla., Grove—Grove School Dist. No. 17, plans to vote on bonds not to exceed \$30,000 to erect school. Address Dist. School Trustees.

Okla., Minco—Board of Education, O. A. Gasaway, Asst. County Supt. of Schools, Chickasha, will erect school; cost \$25,000; 8 classrooms and auditorium; bids opened.

Okla., Tahlequah—Northeastern State Normal will erect dormitory; 2 stories and basement; brick; 26 rooms on each floor.

S. C., Anderson—School District No. 17 will vote April 18 on \$225,000 to pay indebtedness, erect and repair schools; W. P. Wright, Secy., Bd. of Trustees.

S. C., Loris—School Trustees, Loris School Dist. No. 18 will erect building; cost \$16,000; 10 rooms; brick; metal roof; wood floors; steam heat; bids opened April 6; Jas. B. Urquhart, Archt., 1106 Palmetto Bldg., Columbia. (Previously noted.)

S. C., North Charleston—Trustees School Dist. No. 4, J. F. Walker and others, will erect building; 10 classrooms and auditorium; bids opened; David B. Hyer, Archt., Peoples Bldg. (Lately noted.)

S. C., Willington—De La Howe Industrial School, J. E. Branch, Supt., will complete unfinished portions of wing to administration building; also erect metal ceiling over stage portion in present administration building; bids opened; G. Lloyd Preacher & Co., Archts.-Engrs., Augusta, Ga.

Tenn., Clarksville—City will vote April 6 on bonds not to exceed \$150,000 to erect Howell School and colored public school. Address Board of Education.

Tenn., Como—Board of Trustees, Como Separate School Dist., Dr. A. P. Alexander, Prest., will receive bids until April 11 to erect building; plans and specifications at office Raymond B. Spencer, Archt., Goodwyn Institute Bldg., Memphis.

Tenn., Johnson City—City plans election May 3 on \$125,000 bonds to complete Junior High School and improve present structures. Address Board of Education. (Previously noted.)

Tenn., Loudon—Loudon County School Board will erect building in Fifth District at Wicker; cost \$50,000; brick.

Tenn., Sneedville—W. N. Click, Route 4, will receive bids until Apr. 10 to erect consolidated school at Mulberry Gap.

Tex., Emory—Emory Independent District School Board, B. A. Carter, Prest., will receive bids until Apr. 7 to erect building; 10 rooms; brick; plans and specifications at office Wm. R. Ragsdale, Archt., Greenville.

Tex., Fort Worth—Board of City Comms., are considering calling election Apr. 6 on \$100,000 school bond issue.

Tex., Nacogdoches—Stephen F. Austin Normal College will erect building; cost \$17,000; W. E. Ketchum, Archt., Austin.

Va., Harrisonburg—Shenandoah Apartments, Inc., will erect dormitory for State Normal School, Dr. Samuel P. Duke, Prest.; cost \$22,500; 38x78 ft.; brick or stucco over tile; metal and slate roof; oak and pine floors; interior tile; low pressure steam heat, one boiler; electric lights; Chas. M. Robinson, Archt., Richmond; bids opened about Apr. 10. Address C. G. Price, Harrisonburg. (Lately noted.)

Va., Roanoke—City, W. P. Hunter, Mgr., voted \$1,000,000 bonds to include \$500,000 for high school, \$144,000 for site; J. C. Richards, Archt., Philadelphia, Pa.; \$76,000 for elementary school in South Roanoke; \$150,000 for improvements to Virginia Heights School, North West elementary schools and colored schools; \$130,000 for junior high school in South East; D. W. Persinger, Chrmn. School Board. (Lately noted.)

W. Va., Logan—Logan County Board of Education plans to erect 12 school buildings in county; cost \$300,000; bids opened April 14; Richard M. Bates, Jr., Archt., Huntington. (Lately noted.)

W. Va., Princeton—Board of Education, J. E. Woodson, Prest., rejected bids and will have plans revised and call for new bids to erect high school; 2 stories and basement; 60x190 ft.; Wysong & Jones, Archts. (Lately noted.)

Stores.

Fla., Clermont—S. B. Brantley will erect business building on 8th St.; brick.

Fla., Jacksonville—Southern Drug Co., A. N. O'Keefe, Prest., will expend \$30,000 to \$50,000 to remodel building at Laura and Church Sts.

Fla., Tampa—Sanchez & Haya will erect building at 7th Ave. and 15th St.; 2 stories; 75x90 ft.; brick; first floor for stores; second, offices; F. J. Kennard, Archt.

Fla., West Palm Beach—Bijou Amusement Co., purchased property on Narcissus St. and plans to erect number of stores; E. K. Howell, Archt., Savannah, Ga.

Ga., Moultrie—A Huber will erect 3 business buildings. (See Theaters.)

Ky., Williamsburg—Williams Bros. Grocery Co., Main St., will erect 2-story building.

La., Shreveport—M. L. Bath will erect building in Market St.; cost \$200,000; 4 stories; 43x150 ft.; concrete and steel; E. F. Nield, Archt.

Mo., Kansas City—W. F. Gain will erect building at 2642-46 Prospect Ave.; cost \$10,000; 1 story; brick.

Mo., Kansas City—Helen S. Thomas will erect building at 204-6 Westport Ave.; cost \$17,000; 2 stories; brick.

Mo., St. Louis—Simon Jacob will erect 3-story business building at 1125 Locust St.

N. C., Andrews—W. T. Holland and Lee Watkins will erect wholesale feed store; 84x100 ft.; brick.

N. C., Fountain—Gardner & Co. will rebuild business building recently burned; cost \$10,000 to \$15,000.

N. C., Thomasville—A. L. Smith, Thomasville, and M. H. Silver, High Point, will erect block of 3 business buildings; 2 stories; 22x75 ft. each; brick; pressed brick and plate glass fronts.

S. C., St. George—L. Louré will erect business building; 2 stories.

Tenn., Knoxville—Gen. L. D. Tyson will erect store building at 113-15 Gay St.; cost \$20,000; brick.

Tenn., La Follette—Smith & Parrott will erect building on Central Ave.; 50x100 ft.; 2 stories; brick.

Tenn., Loudon—Loudon Development Co. will erect building for stores, offices and apartments; 101x85 ft.; brick; hardwood floors; tar and gravel roof; ornamental terra cotta; steam heat; electric lights; ventilators; Manley & Young, Archts., Knoxville.

Tenn., Memphis—Goodbar Estate will erect 1-story brick and steel building at 250 Monroe St.; cost \$15,000.

Tex., Dallas—Alexander Camp will erect store at 2421-27 Commerce St.; cost \$10,000; one story; brick.

Tex., Yoakum—Frank Klecka will erect buildings for store, garage, gasoline station and gin, etc.

Va., Martinsville—Dr. R. R. Lee and J. A. Brown will erect business building at Church and Walnut Sts.; 52x70 ft.; 2 stories; 4 storerooms on first floor; 16 offices on second; white brick.

Va., Richmond—Miller & Rhoads, Inc. will erect addition at 5th and Grace Sts.; cost \$1,500,000; bids opened. (Lately noted.)

Va., Richmond—Jno. T. Wilson will erect 2 stores at 4th and Grace Sts.; cost \$10,000; 1 story; brick.

W. Va., Bluefield—H. Bellekowsky will erect store on Mercer St.

W. Va., Logan—United Grocery Co. will erect store and apartment building lately noted; cost \$120,000; 68.2x92 ft.; 4 stories and basement; designed for 7 stories; fireproof; steel frame; brick; stone or terra cotta trim; asbestos and tin roof; concrete, oak and maple floors; hollow fireproof and interior tile; ornamental terra cotta; wire glass; vault lights; ventilators; steam heat (vacuum system), \$15,000; hydraulic elevator; work let separately; bids about Apr. 1. Address W. H. St. Clair, Archt., 1217 Lewis St., Charleston. (See Mch. Wanted—Refrigerating Equipment; Ice Machine; Water Storage System; Refrigerators; Ranges (Gas); Lighting Fixtures.)

W. Va., Princeton—American Mercantile Co. building on 4th and Mercer Sts.

Theaters.

Ga., Moultrie—A. Huber will erect theater; also erect 3 business buildings recently burned.

Mo., Kansas City—Capitol Enterprises will expend \$50,000 to remodel Linwood Theater, 3034 Prospect Ave.

Mo., St. Louis—Cinderella Amusement Co. will erect vaudeville and moving-picture theater near Gardenville Terrace.

Tex., Beeville—H. W. Hall and J. S. Hall, Jr., will erect theater; cost \$15,000; 50x130 ft.; brick; tin roof; cement floors; steam heat; W. C. Stephenson, Archt. (Lately noted.)

W. Va., Fairmont—Clark-Linn Realty Co. will erect theater at 310 Main St.; cost \$100,000; seat 500 on lower floor; balcony, 400; reinforced concrete; Jones & Nuzum, Archts. (Lately noted.)

Warehouses.

Fla., Tampa—W. F. Eller will erect warehouse at 327 Florida Ave.; cost \$12,000; brick.

Fla., Tampa—J. B. Safford will erect warehouse at 901-15 Washington St.; cost \$35,000; 210x83 ft.; 1 story; concrete foundation; brick.

Ky., Louisville—Belknap Hardware Mfg. Co., Wm. Heyburn, Prest., will erect building at Main, First, Washington and Brook Sts.; 12 stories; 280x210 ft.; 80,000 sq. ft. floor space; connected to present buildings by bridges; 7 elevators; inside railroad switch to accommodate 6 freight cars; Graham, Anderson, Probst & White, Archts., 120 Broadway, New York. (Previously noted.)

N. C., Biltmore—Brown Hardware Co. will erect warehouse.

N. C., Biltmore—Slayden-Fakes Co., C. S. Davis, Prest., will erect warehouse; cost \$50,000; brick; 40,000 sq. ft. floor space.

Tenn., Chattanooga—Fox Bros. increased capital from \$50,000 to \$100,000 and plan to erect warehouse on King St.

Tenn., Knoxville—Ella Lawson McClung will erect warehouse, 412 State St.; cost \$30,000; brick.

Tex., Abilene—Western Compress & Storage Co., Geo. Finberg, Prest., will erect cotton warehouse; 100x130 ft.; capacity, 5000 bales.

Tex., Houston—Ernest Gray will erect warehouse, Commerce and Jackson Sts.; cost \$13,000; 1 story.

on first floor; lodge rooms, offices, etc., on second floor; lodge rooms, library, lounging room, banquet room, kitchen, parlors on third floor; A. C. Price, Archt., Bradentown; D. L. Douglass, Contr., New Smyrna.

Tex., Melissa—Lodge No. 569, A. F. & A. M., will erect \$7000 building 50x60 ft.; 2 stories; brick; composition roof; cement floors; stoves; electric lighting, \$100; Sparger & Peters, Archts., Bonham; Osburn Bros., Contrs., Melissa. (Lately noted.)

Bank and Office.

Fla., Tampa—Bank of Commerce will improve and enlarge building; cost about \$20,000; contract let.

N. C., High Point—Commercial National Bank, J. Elwood Cox, Pres., will erect bank and office building at S. Main & W. Commerce Sts.; 50x115 ft.; 8 stories; granite brick and terra cotta; composition roof; terrazzo floors; interior tile; metal doors; vaults; main chutes; ventilators; 2 passenger and 1 freight elevators; C. C. Hartman, Archt., Greensboro; R. K. Stewart & Son, Contrs., High Point; bids opened Apr. 1 by Archt. for lighting, plumbing and heating and elevators. Address Contrs. (Lately noted.)

S. C., Holly Hill—First National Bank, J. F. Polk, Pres., will erect building; 2 stories; 30 x 80 ft.; cost \$25,000; Davis E. Hyer, Archt., Peoples Bldg., Charleston; Charleston Engr. & Constr. Co., Contr., Charleston.

W. Va., Grafton—First National Bank will remodel building; \$125,000; column granite exterior finish; marble and mahogany finish for main room; offices on second floor; apartments on third floor; Mowbray and Uffinger, Archts., 56 Liberty St., New York; Schultz, Schriener & Clyde Co., Gen Contrs., Pittsburgh, Pa.; electrification, Bakers Electric Protective Association, Boston, Mass.; vaults, York Safe & Lock Co., York, Pa.

Churches.

Ala., Birmingham—West End Methodist Church will erect building at Cotton Ave., and Elyton St.; cost \$45,000; 68 x 100 ft.; brick and concrete; R. A. Davis, Contr.

D. C., Washington—New McKim Church will alter and repair Memorial Tower and church; cost about \$50,000, including \$20,000 chimneys; F. H. Brooke, Archt.; A. J. Smith, Contr.

Fla., Plant City—First Baptist Church will erect building; cost \$90,000; 105 x 105 ft.; 3 stories; brick, steel and wood; slate and tile roof; concrete, hardwood and tile floors; metal ceilings; Sheet Rock plaster board; ornamental terra cotta; rolling partitions; wire glass; ventilators; steam heat; city lighting; Herbert L. Cain, Archt., Richmond, Va.; L. C. Fallin, Contr., Plant City. (Lately noted.)

Ky., Georgetown—Presbyterian Church will erect Sunday school annex; cost \$18,000; 2 stories; 6 class rooms, study and kitchenette on first floor; assembly room to seat 140, surrounded by 9 class rooms on second; Martin Geretz, Archt., City Nat'l Bank, Lexington; David Wolfe, Contr., Georgetown. (Previously noted.)

La., Thibodaux—Catholic Church will erect presbytery; cost \$30,000; Joseph A. Ridichaux, Contr.

La., Thibodaux—St. Joseph's Church, Rev. A. M. Barbier, Pastor, will erect building; cost \$20,000; contract let. (Lately noted.)

Mo., St. Louis—St. John's Evangelical Church will erect building; cost \$86,795; stone foundation; mott brick super-structure; terra cotta trim; red Spanish tile roof; art glass, organ, church furniture, bowling alleys reserved; A. Meyer, Archt., Central Nat. Bank Bldg.; August Winkel, Contr., 1810

BUILDING CONTRACTS AWARDED

Apartment Houses.

Ark., Pine Bluff—Mrs. R. G. Atkinson will erect apartment house on Laurel St. between 5th and 6th Aves.; 2 stories; 5-room apartments and sleeping-porch on each floor; brick veneer; M. M. Bruce, Contr.

Ark., Pine Bluff—A. B. Aynard will erect apartment house at Twelfth Ave. and Cherry St.; cost \$15,000; 2 stories; 2 apartments on each floor; brick veneer; Swim & Weaver, Contrs.

Fla., Daytona—Julien Arroyo will complete apartment house on S. Ridgewood Ave.; J. Espedahl, Contr. (Previously noted.)

La., New Orleans—Gabe Hausmann will erect frame stucco duplex apartment, Broadway and Hampton Sts.; cost \$23,125; G. E. & E. E. Reimann Co., Ltd., Contrs.

Mo., Kansas City—Ralph Real Estate Investment Co. will erect apartment house on 43rd St. between Oak and McGee Sts.; cost \$250,000; three stories; 38x85 ft.; brick; gravel roof; oak floors; hollow fireproof tile; mail chutes; 10 apartments with separate steam heating plants; N. Peters, Archt., Shawnee, Kans. Address Fred Zurn, Contr., 126 Wirthman Bldg., Kansas City.

Tenn., Nashville—Clarence Bernstein will erect apartment house; cost \$75,000; 45 x 145

ft.; 3 stories; fireproof; built-up asphalt roof; reinforced concrete and oak floors; hollow fireproof and interior tile; C. K. Colley & Co., Archts.; following contracts let: Foundation, Alley Parrotte & Co.; carpenter work, Boon Construction Co.; cut stone, Tanksley, Drumright Co.; plumbing and heating, W. H. Grewar Co.; painting, Chas. A. Howell; electric work, Herbrick & Lawrence; plaster, Reynolds & Ferguson; brick work, W. H. Crandall. (Lately noted.)

Tex., Corpus Christi—J. F. Williams will erect apartment house at 1215 Chapparral St.; 50x150 ft.; frame; 6 apartments; Mr. Burchers, Contr., Cuero; lumber and other material by Garrison Lumber Co.

Tex., Houston—Greenberg Realty Co. will erect apartment house lately noted; cost \$16,000; 40x60 ft.; 4 suites; stucco; hardwood and concrete floors; interior tile; gas steam heat; Frank Meyer, Archt.; Morris H. Greenberg, Contr. (See Mch. Wanted—Heating Plant.)

Association and Fraternal.

Fla., New Smyrna—Masonic Temple Building Comm. will erect temple; cost \$60,000; 60x100 ft.; select face brick with terra cotta trim; cork tile floors; tin roof; 3 storerooms

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Leffingwell St., both St. Louis. (Lately noted.)

N. C., Burlington—Baptist Church will erect building; H. H. Thompson, Contr., Hillsboro.

N. C., Greensboro—Holy Trinity Church will erect Parish House; stone; slate roof; Hobart B. Upjohn, Archt., room 5952 Grand Central Terminal, New York; J. A. Jones Construction Co., Contr., Charlotte; foundation completed.

N. C., Pleasant Garden—Methodist Episcopal Church, South, will erect \$20,000 building; 22 Sunday school rooms; 3 halls; assembly room, kitchen, furnace and fuel room in basement; Mr. Hunt, Archt., Greensboro; W. B. Hunt, Contr., Pleasant Garden.

S. C., Rock Hill—First Presbyterian Church will erect building for Sunday school and social activities; cost \$42,000; brick; slate roof; rift pine floors; steam heat about \$6000; A. D. Gilchrist, Archt., Rock Hill; Southeastern Construction Co., Contrs., Charlotte, N. C. (Lately noted.)

Tenn., Centerville—Methodist Episcopal Church will erect \$30,000 building; 2 stories and basement; 65x90 ft.; plans by Church Extension of M. E. Church, 1115 S. 4th St., Louisville, Ky.; L. B. Connelly, Contr., Centerville.

Tenn., Cleveland—Methodist Church, South, will erect Sunday school building lately noted; cost \$35,000; 78x60 ft.; 2 stories and basement; brick; felt composition roof; pine and concrete floors; hollow fireproof tile; metal ceilings; rolling partitions; wire glass; ventilators; steam heat, \$3000 to \$5000; city lighting, \$1000; plans by Dr. J. W. Baylor Louisville, Ky.; R. L. White, Contr., Cleveland. (See Mch. Wanted—Blower (Electric); Art Glass; Seating.)

Tex., Waco—New Hope Negro Baptist Church, Rev. J. Newton Jenkins, Pastor, will erect building; cost \$50,000; 92 x 110 ft.; concrete and brick; C. H. Leinbach, Archt., 503 Deere Bldg.; J. C. Ray, Contr., both Dallas. (Previously noted.)

Va., Jarratt—High Hill Baptist Church will erect church and Sunday school building; cost \$18,000; 66x75 ft.; 1 story; brick; slate roof; pine floors; hot air heat, \$500; electric lights, \$200; H. L. Cain, Archt., Richmond; C. M. Brown, Contr., Jarratt.

City and County.

La., Shreveport—Fire Station—City Commissioners will erect suburban fire station at Line Ave. and Wilkinson St.; cost \$19,840; W. H. Werner, Contr. (Lately noted.)

N. C., Asheville—City Hall—City will erect addition to city hall; cost \$9,600; 2 fireproof vaults; enlargements on first floor, new wing on second floor; Smith & Carrier, Archts.; L. L. Merchant, Contr. (Lately noted.)

Tex., Fort Worth—Bathhouse—City will erect bathhouse at Forest Park; cost \$18,000; W. C. Hedrick Construction Co., Contr. (Lately noted.)

Tex., Fort Worth—Fire Station—City will erect two fire stations; one at Park Place, near Eight Ave.; cost \$10,725; other, Belmont and Odd Sts.; cost \$10,200; both bungalow type; B. Adams, Contr. (Lately noted.)

Courthouses.

Mo., Union—Franklin County, F. A. Ruger, Clerk, will erect courthouse and jail building; cost about \$200,000; fireproof; 3 stories; 90 x 90 ft.; reinforced concrete, brick and stone; Norman B. Howard, Archt., Arcade Bldg., St. Louis; George H. Gassman Construction Co., Contr., Charleston. (Lately noted.)

Dwellings.

Ala., Gadsden—J. T. Keeling will erect 2 bungalows on Twelfth St.; contract let.

Ark., Pine Bluff—George M. Wells will erect \$10,000 residence in Martin Place; Henry Culpepper, Contr.

D. C., Washington—W. C. Sparks will erect residence at 3224 Cathedral Ave.; cost \$13,500; 2 stories; W. C. & A. N. Miller, Contrs.

D. C., Washington—D. C. McKnew will erect 3 story dwelling, 2441 California St., N. W.; cost \$22,000; W. C. & A. N. Miller, Contrs.

Fla., Tampa—A. W. Perkins will erect residence; cost \$18,000; 45x65 ft.; brick; composition slate surfaced roof; oak, pine and tile floors; Fred J. James, Archt., Citizens Bank Bldg.; John H. Drew, Contr., Room 6, Gas Bldg. (Lately noted.)

Fla., West Palm Beach—Joseph Cudahy, Chicago, Ill., will erect residences on Grace Trail; cost \$35,000; Addison Mizner, Archt.; Cooper C. Lightbown, Contr.

Fla., West Palm Beach—W. J. Warden, Philadelphia, Pa., will erect residence on block between Root Trail and Seminole Aves; cost \$100,000; Addison Mizner, Archt.; Cooper C. Lightbown, Contr.

Ga., Savannah—Joseph F. O'Brien, River and Barnard Sts., will erect residence at Habersham St. and Estill Ave.; cost \$18,000; 40 x 33.4 ft.; 12 ft. sun parlor porch; brick veneer; Oregon fir framing; slate roof; vapor-vacuum heat, cost \$1200; interior tile; hardwood and concrete floors; Snedeker Co., Archt.—Contr. (Lately noted.)

La., New Orleans—Fidelity Homestead Assn. will erect building at Johnson and Galvez Sts.; cost \$10,350; August Frank, Contr.

La., New Orleans—John W. Englehardt will erect raised bungalow, Peters Ave. and Willow St.; cost \$11,260; John F. Charlton, Contr.

Md., Baltimore—George Gebelein, 828 N. Chester will erect 2 story brick dwelling; 3510 Liberty Heights Ave.; 41x33 ft.; slate roof; cost \$12,000; Geo. Wessel, Archt., 2752 Winchester St.; Geo. M. Kirby, Contr., 2629 E. Monument St.

Md., Baltimore—John S. Kirkpatrick, 3215 Piedmont Ave., will erect two 2½-story frame dwellings; 4106-8 Hawthorne Rd.; 25x32 ft.; slate roofs; hot water heat; cost about \$10,000; H. W. Berger, Archt.; John Hupfer Co., Contr., 154 N. Milton Ave.

Md., Baltimore—James Carey, Jr., Lombard and Calvert Sts., will erect residence and garage at Greenway and St. Martin's Rd., Guilford; cost \$20,000; 2½ stories; brick; 32x48 ft.; slate roof; 9 rooms and 3 baths; Colonial design; hardwood floors; porches; vapor heat; E. L. Palmer, Jr., Archt., 513 N. Charles St.; Gladfelter & Chambers, Contrs., 36th St. and Roland Ave. (Lately noted.)

Md., Baltimore—George L. Timanus will erect residence at Wayne and Belmont Aves.; 42x42 ft.; slate roof; cost \$10,000; plans by Hugh Wilson; Jas. L. Hooper, Contr., Gwynn Oak Ave. and Dogwood Rd.

Mo., St. Louis—Wm. A. Schaefer will erect 8 bungalows on Linton Ave. near 20th St.; J. F. Rupp Building and Contracting Co., Contrs.

S. C., Chester—L. E. Brown will erect residence 1½ stories; English type; brick veneer; J. S. Lee, Contr.

Tex., Austin—Dr. George C. Butte will erect residence on Pearl St.; cost \$9100; 36x45 ft.; 2 stories; frame; shingle roof; edge grain pine floors; hot air heat, \$550; city lighting; Glesecke & Harris, Archts.,

Littlefield Bldg.; Scott Yeamans, Contr. (Lately noted.)

Tex., Galveston—John Neethe will erect residence at 3101 Avenue O; cost \$16,000; brick veneer; 10 rooms; Brown Bros., Contrs.

Tex., Houston—M. L. Hurwitz will erect residence and garage; 2 story; brick veneer; cost \$21,000; Russell Brown Co., Contr.

Tex., Paris—W. H. Cooke will erect residence; cost \$15,000; 42x58 ft.; brick veneer; tile roof; hardwood floors; concrete cellar and porch floors; interior tile; plate glass; Weir hot air heat; Walter White, Contr. Address Barry & Smith, Archts. (Lately noted.)

Government and State.

Ga., Savannah—Gun Sheds and Stables—National Guards, R. J. Travis, Colonel, 118th Reg. will erect military stables and gun sheds adjacent to Atlantic Coast Line yards; I. McK. Echols, contractor at \$16,740. (Lately noted.)

N. C., Raleigh—Agricultural Building—Joint Building Commission, H. A. Underwood, Chrmn., 912 Commercial Bank Bldg., will erect Agricultural Bldg.; cost \$312,650; 54x156 ft.; 6 stories; steel frame and concrete; stone and terra cotta facing; built-up roof; rift pine floors; hollow fire-proof tile; ornamental terra cotta; vault doors; interior tile; metal doors; vaults; wire glass; mail chutes; ventilators; steel sash and trim; elevators; H. A. Underwood, Engr.; J. E. Beaman, Contr. (Lately noted.)

Hospitals, Sanitariums, Etc.

Okla., Muskogee—Soldiers Relief Comrs., 544 State Capital Bldg., Oklahoma City, will erect general hospital building; cost \$339,200; 5 stories; 208x115 ft.; 500 beds; fireproof; reinforced concrete, brick and stone; 5-ply built-up roof; concrete and terrazo floors; hollow fireproof and interior tile; metal doors; vaults; wire glass; ventilators; steel sash and trim; 2-pipe vacuum heating system; 2 passenger elevators; Chas. F. Neider and Maurice Jayne, Archts., and F. M. Olston, Asso. Archt., all Oklahoma City; Manhattan Construction Co., Contr., Muskogee. (Lately noted.)

La., Shreveport—Shreveport Charity Hospital will erect nurses' home; cost \$80,500; 96x112 ft.; fire-proof; reinforced concrete frame; built-up tar and gravel roof; cement floor; vacuum heat; hollow fire-proof tile; ornamental terra cotta; Seymour Van Os, Archt., 1212 Merchants Bldg.; W. H. Werner, Contr., Commercial Building. (Lately noted.)

N. C., Wilmington—Walker Memorial Hospital will erect \$60,000 building for nurses' home; 110x37 ft.; 4 stories; reinforced concrete Barrett specification roof; cement floors hardened with Truscon floor hardener; no-low fire-proof and interior tile; metal ceilings; ornamental terra cotta; metal doors; ventilators; James B. Lynch, Archt.; Rhodes & Underwood, Contrs; material purchased. (Lately noted.)

Tenn., Memphis—Block & Goodman, Bry-Block Merc. Co., will erect building for dental clinic on Madison Ave.; cost \$30,000; 75x150 ft.; hollow tile; Barrett flat roof; hardwood and wood block floors; interior tile; metal ceilings; plaster board; ornamental terra cotta; metal doors; rolling partitions; mail chutes; wire glass; steel sash and trim; steam heat; \$3000; city lighting; Mahan & Broadwell, Archts., American Bank Bldg.; Blair Construction Co., Contr., Randolph Bldg. (Lately noted.)

Tex., Abilene—West Texas Baptist Memorial Sanatorium will erect first unit; cost \$150,000; fireproof; face brick; stone trim; interior trim; birchwood; 2 passenger elevators; 3 stories; concrete basement; Walsh & Burney, Contrs., San Antonio.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Hotels.

Ky., Louisville—Hotel McAllister Co. will erect 4-story addition to building; cost \$150,000; 65x110 ft.; Frank V. Newell, Archt., Chicago, Ill.; Geo. W. Langford Co., Contr., Louisville.

Mo., St. Louis—A. D. Gates, Ernest W. Worthington and others plan to erect 10-story apartment hotel on Union Blvd. at entrance of Forest Park; cost \$1,500,000; concrete and steel; mott brick exterior; terra cotta trim; 210 ft. frontage on Union Blvd.; 170 suites of 2, 3 and 4 rooms; Gates Constr. Co., Contr.

N. C., Charlotte—Highland Hotel Co. will erect 51-room addition to Selwyn Hotel; cost \$65,000; 4 stories; fireproof; steel frame; composition roof on concrete; cement floors; vapor heat; electric lights; Louis H. Asbury, Archt.; J. A. Jones Construction Co., Contr. (Lately noted.)

Okl., Muskogee—T. K. Wilson, San Antonio, will erect hotel on Melton hotel site on Broadway; cost \$175,000; 4 stories; 125 rooms with lobby, cafe and business rooms on first floor; Chas. W. Dawson, Archt.; Dougherty-Nichols Construction Co., Contr.

Miscellaneous.

Miss., Jackson — Grandstand — Jackson Baseball Assn. will erect grandstand and bleachers; W. L. Sullivan, Contr.

N. C., Asheville—Funeral Home—Robt. J. Lewis, 97 College St., will erect building; cost \$35,000; 46x95 ft.; concrete, brick and tile; tile roof; concrete floors; steam heat, \$1800; hand power elevator, \$300; Smith & Carrier, Archt., Asheville; Robt. Henderson, Contr., Oteen, N. C. (Lately noted.)

Tenn., Memphis—Fair Building—Park Commrs., J. T. Willingham, Chrmn., Room 4, Courthouse, will erect bathhouse at Tri-State Fair Grounds; C. O. Pfeil, Archt., Union Planters Bank Bldg.; Kaucher & Hodges, contrs. at \$30,875. (Lately noted.)

Railway Stations, Sheds, Etc.

Ark., Jerome—Missouri-Pacific R. R., E. A. Hadley, Ch. Engr., St. Louis, will erect depot; cost \$8000; 24x73 ft.; frame; Barrett Everlastic roof; wood floors; electric lights; E. M. Tucker, Archt., St. Louis, Mo.; Jerome A. Moss, Contr., 608 S. Dearborn St., Chicago, Ill. (Lately noted.)

Schools.

Fla., Orlando—Board of Public Instruction will erect high school; 3 stories; 158x224 ft.; semi-fireproof; tapestry brick and hollow fireproof tile; wood, cement and tile floors; metal ceilings; steam heat; electric lights; ventilators; F. H. Trimble, Archt.; C. C. Hanner, contr. at \$164,430; heating, plumbing and furnishing under separate contracts. (Lately noted.)

Fla., Quincy—State Board of Control, J. T. Diamond, Secy., Tallahassee, will erect laboratory building at Agricultural Experiment Station of University of Florida; cost \$10,000; brick; Edwards & Sayward, Archts., Chamber of Commerce, Atlanta, Ga.; Southern Construction Co., Contrs., Pensacola, Fla. (Lately noted.)

Ga., Good Hope—School Board will erect building; cost \$17,000; Mr. Cooper, Contr., Athens.

La., New Orleans—Tulane University, Dr. A. B. Dinwiddle, Prest., will erect Newcomb gymnasium; cost \$100,000; rennaissance architecture; 90x50 ft. with 60x18 ft. wing on each side; brick; Frank G. Churchill, Archt.; O. M. Gwin Construction Co., Contr.

N. C., Elm City—Elm City Graded School Dist., B. A. Harrelson, Secy., will erect grade school; 2 stories; 8 rooms; Chas. C. Wilson, Archt., 105 Davis Bldg., Wilson; 208 First Natl. Bank Bldg., Gastonia, N. C.; 804-7 Palmetto Bldg., Columbia, S. C.; E. C. Derby, Contr., Fayetteville, N. C. (Lately noted.)

N. C., Raleigh—North Carolina State College of Agriculture and Engineering, Dr. W. C. Riddick, Prest., will erect addition to South Dormitory; cost \$100,000; 44x180 ft.; 3 stories and basement; fireproof; asbestos shingle roof; pine, hardwood and concrete floors; hollow tile; ornamental terra cotta; interior tile; metal doors; wire glass; ventilators; vapor heat; accommodate 165 students; G. Murray Nelson and Thos. W. Cooper, Archts., Commercial Bank Bldg.; C. V. York Co., Contr.; also plans to erect laundry building; cost \$20,000. (Lately noted.)

Okl., Cement—Cement Consolidated School Dist. No. 160 will erect building; cost \$25,475 including heating system, wiring, steel lockers, etc.; 7 rooms and lavatories; brick; asphalt and asbestos roof; edge grain pine floors. concrete in basement; interior tile; ventilators; steel sash and trim; gas; steam heat; Maurice Jayne, Archt.; A. F. Stewart, Contr., both Oklahoma City. (Lately noted.)

Okl., Muskogee—Bacone College will erect girls' and boys' dormitory; cost \$100,000; brick; reinforced concrete; metal lumber; Algonite trim; composition shingle roof; Rezalite and wood floors; Chas. W. Dawson and T. E. Bassham, Asso. Archts., Muskogee; J. H. Reddick, Contr., Fort Smith, Ark. (Lately noted.)

Okl., Oklahoma City—Oklahoma City College will erect administration and classroom building; cost \$210,000; Gothic design; 3 stories and basement; cafeteria and classrooms in basement; assembly room and laboratories on 3rd floor; fireproof; steel, concrete and brick; stone trim; W. T. Schmitt, Archt.; Gross Construction Co., Contr. (Lately noted.)

S. C., Furman—Furman University, Dr. W. J. McGlothlin, Prest., will erect gymnasium; cost \$80,000; swimming pool, basketball court, gymnasium room, boxing and wrestling rooms, indoor track course, showers, lockers and dressing rooms; J. F. Gallivan Building Co., Contr.; J. E. Sirlime, Archt., both Greenville.

S. C., Landrum—School Board will erect building lately noted; cost \$17,000; brick veneer; galvanized shingle roof; pine floors; R. E. Lee, Archt., Clemson College; C. M. Guest, Contr., Anderson. (See Machinery Wanted—Planer.)

Tenn., Erwin—Board of Education will erect school; cost \$35,000; Mullen & Dixon, Contrs.

Tex., Abilene—McMurray College will erect first unit of administration building; cost \$150,000; 152x59 ft., with wing 61 feet; 3 stories and basement; reinforced structural steel frame; face brick; limestone trim; auditorium to seat 500; Walsh & Burney, Contrs.; David S. Castle, Archt.; both San Antonio.

Tex., Canadian—Board of Education will erect ward school; cost \$25,593; 1 story; 8 rooms and basement; brick, tile and frame; metal ceilings; steel sash and trim; ventilators; vaults; J. C. Berry & Co., Archts., Amarillo, Tex.; R. C. Farra, Contr., Woodward, Okla.; R. R. Wheatly, Amarillo, heating and plumbing at \$5600. (Lately noted.)

Va., Ashland—Randolph-Macon College will erect library building; cost \$60,000; 72x47 ft.; 2 stories; fireproof; brick; Indiana limestone trim; Edw. L. Tilton, Archt., 52 Van-

derbilt Ave., New York; Hunt & Arnheim, Contrs., Richmond, Va.

Va., Richmond—City School Board, C. P. Walford, Clk. and Supervisor, will erect John Armstrong High School for negroes at Leigh and 20th Sts.; cost \$164,000; steel and concrete frame; brick face; tin roof; maple or rift pine floors; hot air heat; C. M. Robinson, Archt.; Harwood & Moss, Contrs. (Lately noted.)

Va., Radford—Radford State Normal, J. P. McConnell, Prest., will erect addition to dormitory; 102x40 ft.; Riley Roop, Contr.

Stores.

Ga., Atlanta—Hurst & Quinn, Trust Co. of Georgia Bldg., will erect stores at 200-06 W. Peachtree St.; cost \$16,000; 60x100 ft.; brick; tar and gravel roof; hardwood and concrete floors; ornamental terra cotta; wire glass; Griffin-Hodges Co., Contr., Candler Bldg. (Lately noted.)

Ky., Catlettsburg—N. Braley & Son will erect business building; 3 stories; 60x100 ft.; fireproof; tapestry brick; concrete base; Geo. McKenzie and Carl Moore, Contrs.

La., Shreveport—T. K. Giddens will erect building at Milan and Marshall Sts.; 5 stories; 80x150 ft.; reinforced concrete and steel; E. F. Field, Archt.; Central Construction Co., Contr. (Lately noted.)

Miss., Greenwood—Jno. Dahmer will erect 3 stores; cost \$25,000; 2 stories; 87x100 ft.; brick; R. I. Humphries, Contr.

N. C., Burlington—Albert H. King will erect business building on Andrews St.; brick; contract let.

N. C., Charlotte—Geo. E. Wilson will erect building for Stieff Piano Co.; cost \$25,000; 20x125 ft.; 2 stories and basement; brick; L. L. Hunter, Archt., Kinney Bldg.; Thies-Smith Co., Contr. (Lately noted.)

Va., Richmond—M. B. Florsheim will erect several stores at First and Marshall St.; cost \$17,760; H. T. Barnes, Archt.; R. M. Anderson, Contr.

Warehouses.

Ga., Atlanta—Cathcart Van & Storage Co., T. F. Cathcart, Prest., 6-8 Madison Ave., will erect warehouse on Houston St. between Courtland and Piedmont Sts.; cost \$250,000; 7 stories; 60,000 sq. ft. floor space; reinforced concrete and steel; G. Lloyd Preacher, Archt.; Gude & Co., Contrs.

N. C., Charlotte—Standard Bonded Warehouse Co., J. M. Vanhoy, Secy.-Treas., will erect addition of 4 compartments and work shed; cost \$25,000 to \$30,000; J. A. Jones Construction Co., Contr.

Tenn., Memphis—Pidgeon-Thomas Iron Co. will erect warehouse addition on Main St.; cost \$65,000; 354x165 ft.; steel, concrete and brick; steel trusses; fireproof roof; multiple steel sash window; concrete floors; metal doors; wire glass; electric lights; electric elevators; install 15-ton travelling crane; E. L. Harrison, Archt.-Engr.; Sam Malkin, Contr.; Wagner Electric Co., wiring \$4600. (Lately noted.)

W. Va., Huntington—Watts-Ritter & Co. will erect warehouse and office building; cost \$75,000; 5 stories; 50x150 ft.; brick and concrete; built up composition roof; concrete floors; hot air heat; gas fuel; city lights; elevators; Robt. L. & Sidney L. Day, Archts., Huntington; American Engineering & Construction Co., Contr., Charleston; material purchased. (Lately noted.)

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MACHINERY, PROPOSALS AND SUPPLIES WANTED

Art Glass.—S. N. Varnell, Cleveland, Tenn.—Stained glass windows. (See Contracts Awarded, Churches.)

Automatic Glass Blowing Machinery.—Three Rivers Glass Co., 520 Bedell Bldg., San Antonio, Tex.—Invite bids on complete automatic glass blowing machinery, including automatic feeder with air compressor, etc., for glass plant with daily capacity of from 100 to 300 gross bottles. (See Construction News—Miscellaneous Factories.)

Band Saw.—Moss Rowe Furniture Co., W. L. Moss, Mgr., 115 W. 9th St., Joplin Mo.—Band saw.

Barges.—U. S. Engr. Office, Pittsburgh, Pa.—Bids until Apr. 21 to furnish and deliver 3 steel deck barges; information on application.

Barges.—U. S. Engr. Office, Room 710 Army Bldg., New York City.—Bids until Apr. 17 to construct and deliver one steel oil barge and one steel water barge; information on application.

Barges.—N. J. Steigleder & Son, 1310 Barton Ave., Richmond, Va.—Second-hand barges, capacity about 50 to 200 tons.

Bath Cabinets (Electric).—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on 2 electric bath cabinets; immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Belting and Shafting.—Peerless Motor Sales Co., 409 Virginia Ave., Joplin, Mo.—Belting and shafting.

Blackboard.—L. S. Bradshaw, Salisbury, N. C.—4500 sq. ft. natural slate blackboard; 3.6 ft. wide by ½ thick.

Blocks and Curbing (Granite).—New Orleans Port Comms., Suite 200 New Orleans Court Bldg., New Orleans, La.—Bids opened April 6 to furnish 38,000 small granite blocks and 1000 lin. ft. of granite curbing.

Blower (Electric).—S. N. Varnell, Cleveland, Tenn.—Electric blower for pipe organ. (See Contracts Awarded—Churches.)

Boiler.—James B. Porter, Box 255, Norfolk, Va.—45 H. P., horizontal, return tubular boiler with stack and fixtures; second-hand.

Bottles (Glass).—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on 2, 3 and 5 gal. glass bottles with crates, to be shipped in carload lots; immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Bottling Equipment.—B. R. Stone, Mgr., American Products Corp., Reidsville, N. C.—Prices on filling, corking and labeling machines, conveyors and other small equipment for plant with daily capacity of 500 gross, 3½ oz bottles of Nu Shine.

Brass and Monel Metals.—Navy Dept., Bureau of Supplies and Accounts, Washington, D. C.—Bids until April 11 to deliver brass and monel metal to navy yard at Washington; information on application.

Brake (Cornice).—James B. Porter, Box 255, Norfolk, Va.—8 ft. tinners hand cornice brake; second-hand.

Bridge Construction.—Winston County Supvrs. B. M. McCully, Clk., Louisville, Miss.—Bids opened to build bridge over Jones Creek. (See Construction News—Bridges, Culverts, Viaducts, Etc.)

Bridge Construction.—Morgan County Court, Versailles, Mo.—Bids until Apr. 10 to build bridge near city. (See Construction News—Bridges, Culverts, Viaducts.)

Bridge Construction.—Tom Green County Comms., San Angelo, Tex.—Bids until Apr. 10 to build 500-ft. concrete bridge across North Concho River. (See Construction News—Bridges, Culverts, Viaducts.)

Bridge Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Apr. 14 to build bridge on State road from West Ely westward; 20-ft. reinforced concrete slab span; 2 reinforced concrete abutments; cost \$4535.80; Marion County, State Aid Project No. 20.38; M. J. Harriek, Div. Engr., Howe Bldg., Macon, Mo. (See Construction News—Bridges, Culverts, Viaducts.)

Bridge Construction.—Galveston County, E. B. Holman, County Judge, Galveston, Tex.—Bids until Apr. 17 to build reinforced concrete pile trestle bridge over Dickerson Bayou on State Highway No. 2; thirteen 20-ft. deck girder spans; 650 cu. yds. concrete; Federal Aid Project No. 252; C. C. Washington, County Engr. (See Construction News—Bridges, Culverts, Viaducts.)

Bridge Construction.—City of Port Arthur, Tex.—Bids about Apr. 6 on sub structure and fender piles for Strauss Bascole lift bridge; plans, etc., from Strauss Bascole Bridge Co., Chicago, Ill.; M. C. Erwin, City Engr. (See Construction News—Bridges, Culverts, Viaducts.)

Brick Plant Equipment.—Model Brick Co., Fritz Aebi, Prest., Houston, Tex.—Prices on second hand equipment for 12,000 capacity brick plant. (See Construction News—Clay-working Plants.)

Broom Making Machinery.—C. H. Hill, Tignall, Ga.—Names and addresses mfrs. of mchy. for making "broom corn" brooms.

Bucket (Drag Line).—Henry Lewis & Co., Commercial Trust Bldg., Philadelphia, Pa.—¾ or 1 yd. drag line bucket.

Building Materials.—H. D. Watts Co., Garrett Bldg., Baltimore, Md., is estimating on construction of \$300,000 market building at Norfolk, Va.; 109 x 232 ft.; 2 stories and basement; reinforced concrete; desires sub-bids and estimates until April 10.

Building Materials.—G. E. Harrison, Crossville, Tenn.—Building materials including brick, cement, glass and steel for construction 50 x 90-ft. garage. (See Construction News—Motor Cars, Garages, Tires, etc.)

Building Material.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Sub-bids and estimates until Apr. 8 for building material for market, including tiles and tile work, excavating, reinforcing steel, concrete work, liquid cement hardener, brick work, terra cotta partitions, architectural terra cotta, granite, Indiana limestone, artificial stone, tile vaulting, Barrett roofing, sheet metal, structural steel, ornamental iron, metal toilet partitions, metal cupboard doors, hollow metal doors, steel sash, casement sash, millwork, wire screen, glass, plastering, stucco, composition floors, painting, cork insulation. (See Buildings Proposed, City and County, Va., Norfolk.)

Canal Construction.—City of Port Arthur, Tex.—Bids about April 6 to construct Sabine Neches canal; M. C. Erwin, City Engr. (See Construction News—Miscellaneous Construction.)

Canning Outfits.—Bailey B. Dawson, Lodge, Va.—Names and addresses mfrs. of home canning outfits.

Cans.—Bailey B. Dawson, Lodge, Va.—To purchase cans for home canning outfit.

Cars.—Wm. Herbert, Sturgis, Ky.—Prices on cars and accessory equipment for coal mining.

Cars (Dump).—Pennsylvania Equipment Co., Norwood, Pa.—10 second-hand 36-in. gauge, end dump cars; capacity 2 tons crushed stone.

Cars (Log).—R. P. Johnson, Wytheville, Va.—Fifteen 60,000 lb. log cars.

Carving Machine.—Shand Builders' Supply Co., 615 Hampton St., Columbia, S. C.—To purchase carving machine.

Casing (Oil Well).—W. W. Hancock, Box 592,

Lynchburg, Va.—Estimates on oil well casing. (See Construction News—Gas & Oil Enterprises.)

Castings, etc.—M. W. Smith, Box 388, Gainesville, Fla.—Prices on small castings in rough for air compressors, steam engines and pumps.

Cement.—C. J. Mulkey, Westminster, S. C.—Prices on one car of cement.

Cement.—City, S. W. Bevil, Mayor, New Albany, Miss.—Bids until Apr. 4 for cement. (See Construction News—Road and Street Construction.)

Cold Storage Plant.—Henry N. Carrier, Brevard, N. C.—Data and prices on small cold storage plant to be operated by water power.

Concrete Mixer.—Massell Realty Co., Atlanta, Ga.—Concrete mixer. (See Buildings Proposed—Bank and Office.)

Conveyors.—See Bottling Equipment.

Cots (Sanitary).—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on 50 zinc covered sanitary cots; immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Crane.—Wm. F. Broening, Prest., Board of Awards, Baltimore, Md.—Bids until April 12 to furnish and deliver portable crane to Water Dept., Richard Gwinn, City Register; Wm. A. Megraw, Water Engr.

Crockery.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until April 8 to furnish 12,000 coffee cups and 10,000 Saucers, delivery to Depot Quartermaster, U. S. Marine Corps, Philadelphia, Pa.; Sch, 286; information on application.

Cutter (Paper).—William Center, 822 Main St., Joplin, Mo.—Paper cutter for printing plant.

Crusher.—Henry Lewis & Co., Commercial Trust Bldg., Philadelphia, Pa.—18 to 36 or larger jaw crusher.

Dies.—Clyde West, Williston, North Dakota.—Names and addresses mfrs. of dies to cut cloth for mfrs. of overalls, jackets, canvas gloves, etc.

Drainage.—Jackson County Comms., of Drainage Dist. No. 9, Newport, Ark.—Bids open in about 60 days to construct 3 canal, reclaiming 11,000 acres; approx. cost \$40,000; Bowman Engineering Co., Engr., Arkansas Bank & Trust Bldg. (See Construction News—Drainage Systems.)

Drilling (Oil).—W. W. Hancock, Prest., Texas-Arkansas Petroleum Corp., Box 592, Lynchburg, Va.—Prices on oil well drilling; correspond with oil well drillers.

Drilling (Oil).—W. W. Hancock, Box 592, Lynchburg, Va.—Estimates on oil drilling and casing for oil wells. (See Construction News—Gas and Oil Enterprises.)

Drilling (Well) Machines.—Duncan Mchy. Co., 721 N. Central St., Dempster Bldg., Knoxville, Tenn.—Prices and data on small well drilling machines, without power, safe for drilling 200 ft. holes; new or second-hand.

Electric and Steam Equipment.—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on electric and steam equipment. (See Construction News—Miscellaneous Enterprises.)

Electrical Equipment.—Youngsville Sugar Co., Youngsville, La.—70 K.W., 3 phase alternator, 440 volts, 60 cycle; 2.2 K.W. exciter at 125 volts; switchboard with necessary instruments for controlling and protecting apparatus.

Engines (Fire, Chemical).—George J. Adams, Const. Engr., Norwalk, Conn.—Two chemical fire engines, gasoline driven.

Engines (Gasoline and Oil).—Duncan Mchy. Co., Dempster Bldg., 721 N. Central St., Knoxville, Tenn.—Jobbers prices on gasoline and oil burning engines, both large and small.

Face Brick.—Virginia Building Material Co.,

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527 E. Main St., Richmond, Va.—Names and addresses mfrs. of face brick; to purchase several carloads of both red and white tapestry brick; prices delivered to Richmond.

Flag Pole (Steel).—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Bids until April 8 for steel flag pole for market building. (See Buildings Proposed, City and County, Va., Norfolk.)

Flooring (Hardwood).—Fred S. Campbell, 908 Pickens St., Columbia, S. C.—Hardwood flooring. (See Buildings Proposed—Dwellings.)

Garage Equipment.—Wm. Gilmore Auto & Machine Co., 2116-6th St., Meridian, Miss.—Prices on pistons, piston pins, cylinder rings and other automobile accessories. (See Construction News—Motor Cars, Garages, Tires, etc.)

Hardware.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Bids until April 8 for hardware for market building. (See Buildings Proposed, City and County, Va., Norfolk.)

Heating Plant.—Greenberg Realty Co., Houston, Tex.—Gas steam radiators; 24 to 25 in. high; 4, 6 and 8 sections. (See Contracts Awarded—Apartment Houses.)

Heating Plant.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Bids until April 8 for heating plant for market building. (See Buildings Proposed, City and County, Va., Norfolk.)

Heating and Plumbing System.—Treasury Dept., Supv. Archt's Office, Washington, D. C.—Bids until Apr. 18, for steam heating system, plumbing and wiring changes in main building, U. S. Marine Hospital, Mobile, Ala.; plans on file or with Custodian at Mobile.

Hollow Tile.—G. Murray Nelson and Thos. W. Cooper, Raleigh, N. C.—Hollow tile (load bearing) for backing up brick work. (See Buildings Proposed, Schools—N. C. Cullowhee.)

House Moving Equipment.—Carpenter—Williams Co., R. 3, Box 133 Petersburg, Va., Data and prices on house moving equipment.

Hull for Dredge.—U. S. Engr. Office, Nashville, Tenn.—Bids until Apr. 11 to construct and deliver steel hull for dredge; information on application.

Ice Machine.—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Ice Machine. See Refrigerating Equipment.

Incinerators.—P. D. Gold, Mayor, Seabreeze, Fla.—To correspond with contractors and engineers for construction of \$5000 incinerator.

Inlet Construction.—Jupiter Inlet Dist., of Palm Beach County, H. A. Pennock, Secy., Jupiter, Fla.—Bids until April 12 to construct inlet cut, approach channel and jetties; plans with J. C. Wagen, Chf. Engr., Lake Worth, Fla.

Kettles (Steel Steam Jackets).—B. R. Stone, Mgr. American Products Corp., Reidsville, N. C.—Prices on 50 to 100 gal. capacity steel team jacket kettles. (See Construction News—Miscellaneous Factories.)

Kitchen Equipment.—G. Murray Nelson and Thos. W. Cooper, Raleigh, N. C.—Kitchen equipment. (See Buildings Proposed, Schools—N. C. Cullowhee.)

Labelling Machines.—See Bottling Equipment.

Lathe.—John G. Duncan Co., Dempster Bldg., 721 N. Central St., Knoxville, Tenn.—Jobbers prices on small second-hand iron lathe for turning saw mandrels and regular job work; used in repair shop.

Lathe.—Forsythe Mfg. Co., 319 E. 3rd St., Joplin, Mo.—Lathe.

Lathe.—Wade H. Martin, 1830 Byers Ave., Joplin, Mo.—Lathe.

Lathe, etc.—Peerless Motor Sales Co., 409 Virginia Ave., Joplin, Mo.—Lathe, emery wheel, etc.

Lathe.—Moss-Rowe Furniture Co., W. L. Moss, Mgr., 115 W. 9th St., Joplin, Mo.—Lathe.

Laundry Machinery.—J. P. Long, Thomasville, N. C.—To correspond with mfrs. of or dealers in laundry mchy.

Lighting Fixtures.—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Lighting fixtures. (See Buildings Proposed—Stores, W. Va., Logan.)

Limestone (Indiana).—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Indiana limestone. (See Building Material.)

Loader.—R. P. Johnson, Wytheville, Va.—Barnhart loader.

Locomotives.—Wm. Herbert, Sturgis, Ky.—Prices on electric locomotives for coal mining.

Locomotive.—R. P. Johnson, Wytheville, Va.—40 ton locomotive.

Lumber.—Matagorda County Comms., J. H. Pyle, Bay City, Tex.—Bids until April 11 to furnish 200,000 ft. lumber to repair bridge at Cortes switch, west of Colorado river.

Machine Shop Equipment.—C. H. Mebane, Jr., 123-3rd St., Newton, N. C.—Bids open for equipment of shop to mfr. autolocking adjustable wrench. (See Construction News—Foundry and Machine Plants.)

Metal Ceilings.—L. C. Fallin, Plant City, Fla.—Prices and samples on metal ceiling.

Metal Ceilings.—T. J. Thornhill, Box 31, San Antonio, Tex.—Names and addresses mfrs. of metal ceilings; with view to representation in South Texas territory.

Metal Doors.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Hollow metal doors and metal cupboard doors. (See Building Material.)

Metal Lumber.—G. Murray Nelson and Thos. W. Cooper, Raleigh, N. C.—Metal lumber. (See Buildings Proposed, Schools—N. C. Cullowhee.)

Mill (Peanut Butter).—C. E. Relch, Mgr., National Peanuts Product Co., Waverly, Va.—Prices on peanut butter mill for 5000 lbs. daily capacity plant. (See Construction News—Miscellaneous Factories.)

Mill Doors.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Mill work. (See Building Material.)

Mining Machinery.—Wm. Herbert, Sturgis, Ky.—Prices on coal mining machines, hoisting, conveying and coal washing mchy. etc.

Mixer (Concrete Paving).—Jesse L. Rogers, Lafollette, Tenn.—Concrete paving mixer.

Miscellaneous Supplies.—Panama Canal, A. L. Flint, General Purchasing Officer, Washington, D. C.—Bids until April 11 to furnish: Nickel chrome-steel castings; rheostats; cord; mica plate; resistance wire; barbed wire; car roofing; vibrating flue cleaner; galvanized buckets; ash cars; mop heads; cocoa or burlap bags; solid tires; lubricating oil and white oak lumber. Blank forms and information (Circular 2289) on application to office of Panama Canal; Asst. Purchasing Agt. at Fort Mason, San Francisco.

Motors.—Wilson-Hock Co., City Point, Va.—Two 25 H. P., 550 volts, 3 phase, 60 cycle, 900 R. P. M., new Allis-Chalmers, General Electric or Westinghouse motors complete with bases, rails, pulleys and no voltage starter.

Motor.—John G. Duncan Co., Dempster Bldg., 721 N. Central St., Knoxville, Tenn.—Jobbers prices on 150 H.P., 2300 volts, A.C. motor.

Motors.—Youngsville Sugar Co., Youngsville, La.—One 50 H.P. and one 30 H.P. 3 phase, 440 volt motor with starter.

Motor (Slip Ring).—Standard Electric Machinery Co., 7 E. Hill St., Baltimore, Md.—450

or 500 H.P. slip ring motor, 3 bearing, pulley, slide rails and starter for constant duty and constant speed; 3 phase, 25 cycle, 440 volt; not accept re-connected motor.

Office (Physician) Equipment.—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on complete equipment for physician office; immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Painting.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Bids until April 8 on painting for market building. (See Buildings Proposed, City and County, Va., Norfolk.)

Paint Mill.—John T. Wyatt, R. 3, Box 10, Salisbury, N.C.—To purchase mill to grind paint, prefer one with granite stones.

Patterns and Blueprints (Air Compressor, etc.)—M. W. Smith, Box 388, Gainesville, Fla.—Prices on patterns and blue prints of air compressors, steam engines, and pumps.

Paper Plant Equipment.—Trinity Wax Paper Co., R. G. Smythe, Mgr., 3008 Williams St., Dallas, Texas—Prices on printing presses, trimmers, slitters, for plant with daily output 4 tons printed and plain wax paper. (See Construction News—Misc. Facts.)

Paving Equipment.—J. S. Holloway Construction Co., Hattiesburg, Miss.—Concrete paving equipment.

Paving.—City, Cameron, Mo.—Bids until Apr. 12 to pave several streets. Address The Mayor. (See Construction News—Road and Street Construction.)

Paving.—City, C. J. Wright, Treas., Waynesboro, Va.—Bids opened to pave 18,000 sq. yds. streets; bituminous macadam; plans, etc. on file. (See Construction News—Road and Street Construction.)

Paving.—City, St. Charles, Mo.—Bids until Apr. 10 to pave downtown district; concrete. Address The Mayor. (See Construction News—Road and Street Construction.)

Paving.—City, S. W. Bevil, Mayor, New Albany, Miss.—Bids opened to construct water bound macadam streets (Birmingham slag); 6000 sq. yds. concrete pavement; T. E. Marshall, Clk.; J. N. Wilson, Engr. (See Construction News—Road and Street Construction.)

Paving Equipment.—Randolph County, H. C. Kesling, County Clk., Elkins, W. Va.—Paving equipment including, cement, sand, stone, road oil, road oiling equipment motor trucks, rollers, graders, scrapers, drags, rock crushers and culverts. (See Construction News—Road and Street Construction.)

Paving.—City, Wm. Koehler, Mgr., Williston, Fla.—Bids until Apr. 18 to lay 1600 sq. yds. paving; brick, asphaltic block or other paving on rock base and sand cushion; construct 1½ mi. rock base, asphaltic macadam or other paving; plans, etc. on file or from Edward Drake, City Engr., Room 20, Holder Block, Ocala, Fla. (See Construction News—Road and Street Construction.)

Paving.—City, P. A. Poag, Secy., Monroe, La.—Bids opened to pave Jackson St.; 28,000 sq. yds. paving; 16,000 ft. curbing and gutter; 8000 ft. curb; 56 inlets, etc.; plans, etc. from R. S. Reynolds, City Engr. (See Construction News—Road and Street Construction.)

Paving.—Town, C. G. David, Clk., Pineville, La.—Bids opened to pave Melrose St.; gravel; plans, etc. with H. J. Daigne, Engr. (See Construction News—Road and Street Construction.)

Paving.—Town, J. P. Russell, Clk., Lumberton, N. C.—Bids until Apr. 18 to construct 20,000 sq. yds. paving; plans, etc. from Carolina Engineering Co., Engr., 412 Southern Bldg., Wilmington, N. C. (See Construction News—Road and Street Construction.)

Paving.—City, M. G. James, Secy., Dallas,

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Tex.—Bids soon to pave Clinton Ave. from King's Highway to South City limits, and Belmont Ave. from Greenville Ave. to city limits; Geo. D. Fairtrace, City Engr. (See Construction News—Road and Street Construction.)

Paving.—City, Clarence E. Ridley, Mgr., Bluefield, W. Va.—Bids until April 11 to construct concrete sidewalks and crosswalks; specifications from City Engr. (See Construction News—Road and Street Construction.)

Paving.—City, S. D. Newton, Engr., Cleveland, Tenn.—Bids until Apr. 19 to pave several streets in Improvement Dists. No. 11, 16, 17, 18, 21, 22, 23, 24, 25, and 26; asphaltic concrete with or without concrete base; bituminous macadam (Penetration), cement concrete, etc.; 16,250 cu. yds. grading; 62,100 cu. yds. paving, 12,735 sq. yds. walks; etc.; plans, etc., on file. (See Construction News—Road and Street Construction.)

Paving.—Town, J. W. Johnson, Mayor, Bridgeport, Va.—Bids until Apr. 20 to pave, grade and curb Philadelphia Ave., Virginia St., Johnson Ave., and Mechanic St.; 12,000 lin. ft. curbing; 13,000 sq. yds. paving; concrete, penetration asphalt, tarvia double seal bituminous macadam; plans, etc., from Horn Bros., Engrs., 314 W. Main St., Clarksburg, W. Va. (See Construction News—Road and Street Construction.)

Paving.—City, W. R. Barringer, Mayor, Florence, S. C.—Bids until Apr. 20 to construct 100,000 sq. yds. paving; 50,000 lin. ft. concrete curb and gutter; asphaltic, bituminous, brick and cement concrete; plans, etc., from Adams & Ervin, Res. Engrs., Barringer Bldg., Florence, or Nisbet Wingfield, Consol. Engrs., 814 Lamar Bldg., Augusta, Ga. (See Construction News—Road and Street Construction.)

Paving.—City Board of Bond Trustees, I. Silverman, Secy., Wauchula, Fla.—Bids until May 31 to construct 58,500 sq. yds. paving; brick, cement, concrete, bituminous concrete or asphalt block; 58,500 sq. yds. rock or clay base; 39,440 lin. ft. concrete curb, etc.; plans, etc., from J. G. Kimmel, Engr., Arcadia, Fla. (See Construction News—Road and Street Construction.)

Piston Pins.—See Garage Equipment.

Planer.—C. M. Guest, Anderson, S. C.—Second-hand pony planer with at least one side head; good condition. (See Contracts Awarded, Schools—S. C., Landrum.)

Planer and Matcher.—R. P. Johnson, Wytheville, Va.—4 side planer and matcher, medium weight machine.

Power Plant Equipment.—Wm. Herbert, Sturgis, Ky.—Prices on power plant equipment for coal mines.

Plumbing.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Bids until April 8 for plumbing for market building. (See Buildings Proposed, City and County, Va., Norfolk.)

Press (Hay).—C. J. Mulkey, Westminster, S. C.—Small portable hay press.

Protectors (Electric Light).—W. S. Harkness, Jellico, Tenn.—Names and addresses mfrs. of woven wire electric light protectors for gymnasium; sizes 12-in. diam., 5-in. deep.

Pumps.—Star Service Co., 203-2nd. Ave., Meridian, Miss.—Pumps for 2 filling stations. (See Construction News—Motor Cars, Garages, Tires, etc.)

Radio Outfits.—J. J. Disosway, Prest., Cotton States Belting & Supply Co., 257 Decatur St., Atlanta, Ga.—To correspond with mfrs. of radio outfits for home and business purposes.

Rails, etc.—Universal Concrete Products Co., New Martinsville, W. Va.—500 ft. of 85

lb. relay rails, complete railroad switch, frog, etc.

Ranges (Gas).—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Refrigerating equipment including ice machine, automatic water storage system and refrigerators. (See Buildings Proposed—Stores, W. Va., Logan.)

Refrigerating Equipment.—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Refrigerating equipment including ice machine, automatic water storage system and refrigerators. (See Buildings Proposed—Stores, W. Va., Logan.)

Refrigerators.—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Refrigerators. See Refrigerating Equipment.

Rug Cleaning Machinery.—C. S. Allen, Greenville, S. C.—Prices on rug cleaning mch.

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Apr. 14 to construct 2.288 mi. State road from West Ely westward; cost \$12,939.78; Marion County, State Aid Project No. 20.38; W. J. Harriek, Div. Engr., Howe Bldg., Macon, Mo. (See Construction News—Road and Street Construction.)

Road Construction.—Caldwell County Comms., Frank Walker, Chrmn., Princeton, Ky.—Bids opened to construct 5 mi. Princeton-Cadiz road, beginning at Station 150; Macadam; grading, draining and surfacing. (See Construction News—Road and Street Construction.)

Road Construction.—Louisiana Highway Comn., 401 Maison Blanc Annex, New Orleans, La.—Bids opened to construct 15.04 mi. Arcadia-Natchitoches highway, Arcadia to Bienville; Bienville Parish; W. T. Peterman, Chrmn.; Jas. H. Fourmy, State Highway Engr. (See Construction News—Road and Street Construction.)

Road Construction.—Louisiana Highway Comn., 401 Maison Blanc Annex, New Orleans, La.—Bids opened to construct 4.9 mi. Morgan City-Houma highway; Assumption Parish; W. T. Peterman, Chrmn.; Jas. M. Fourmy, State Highway Engr. (See Construction News—Road and Street Construction.)

Road Construction.—Louisiana Highway Comn., 332 Maison Blanche Annex, New Orleans, La.—Bids until Apr. 17 to construct 18.5 mi. Joseph-Somerset highway; Tensas Parish; W. T. Peterman, Chairman, plans, etc., on file. (See Construction News—Road and Street Construction.)

Road Construction.—Haywood County Comms., H. Arthur Osborne, Chrmn., Waynesville, N. C.—Bids until Apr. 12 to construct 4.53 mi. hard surface road between Canton and Woodrow; 47,000 sq. yds. plain and 47,000 sq. yds. reinforced concrete; 38,500 sq. yds. Topeka Top, or 38,500 sq. yds. sheet asphalt; plans, etc., on file, or from State Highway Comn., Asheville, N. C. (See Construction News—Road and Street Construction.)

Road Construction.—Marion County Comms., Ocala, Fla.—Bids until Apr. 11 to construct 15 mi. section of Road No. 2 between Belleview and Lake County line; 14,000 sq. yds. surfacing; alternate bids on bituminous concrete and sheet asphalt, on either concrete or crushed stone base; also on plain cement concrete pavement; plans, etc. from Div. Engr. or T. D. Lancaster, Jr., Clk., County Comms.; or Wm. F. Cooke, State Highway Engr., Tallahassee, Fla. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Dept., Jefferson City, Mo.—Bids until Apr. 13 to construct 6.693 mi. State road from Mound City eastward, Oregon eastward and Maitland southward; cost \$48,347.10; Holt County, State Aid Project No. 20.37; A. C. Lingley, Div. Engr., Ballinger Bldg., St. Joseph, Mo. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Dept., Jef-

erson City, Mo.—Bids until Apr. 14 to construct 3.47 mi. State road from Stockton to Greenfield; cost \$10,842.23; Cedar County, State Aid Project No. 20.136; M. S. Murray, Div. Engr., Sikeston, Mo. (See Construction News—Road and Street Construction.)

Road Construction.—Lake County Comms., H. R. Ferran, Chrmn., Tavares, Fla.—Bids until Apr. 27 to grade, drain and surface with sand clay or shell, 19 mi. section of road A, in East Lake County Special Road and Bridge Dist., between Altoona and Astor; plans etc., from T. C. Smith, County Clk., or Ger. E. Heller, County Engr.; both Tavares. (See Construction News—Road and Street Construction.)

Road Construction.—D. E. H. Manigault, State Div. Engr., El Paso, Tex.—Bids within 30 days to construct 12.5 mi. State Highway No. 1; Ward County, Federal Aid Project No. 263; 33,573 cu. yds. caliche and 16,236 cu. yds. gravel surfacing. (See Construction News—Road and Street Construction.)

Road Construction.—Allendale County Supvrs., J. E. Bryan, Supvr., Allendale, S. C.—Bids until April 11 to construct 10.369 mi. Allendale-Augusta road; F. A. Project 86; plans, etc., on file at Allendale, and with State Highway Engr., Columbia, S. C. (See Construction News—Road and Street Construction.)

Road Construction.—Jefferson County Board of Revenue, Birmingham, Ala.—Bids until April 21 to surface 7 mi. Lock 17 road; 14,000 cu. yds. chert, gravel or shale surfacing; plans, etc., with C. J. Rogers, County Highway Engr. (See Construction News—Road and Street Construction.)

Road Construction.—Orange County Comms., B. M. Robinson, Clk., Circuit Court, Orlando, Fla.—Bids until April 18 to grade portion of Orlando-East Coast road between Orlando and Bithlo; 16 mi.; plans, etc., from Chas. A. Browne, Ch. Engr. (See Construction News—Road and Street Construction.)

Road Construction.—Surry County Supvrs., Surry, Va.—Bids opened April 4 to construct 4.11 mi. Dendron road; 3 mi. Waverly-Claremont road; plans, etc., from County Clk., Surry, and State Highway Commr., 116 S. Third St., Richmond, Va. (See Construction News—Road and Street Construction.)

Road Construction.—Harris County, H. L. Washburn, County Auditor, Houston, Tex.—Bids until Apr. 10 to rebuild Alameda road; plans, etc., with County Engr. (See Construction News—Road and Street Construction.)

Road Construction.—State Highway Comn., Montgomery, Ala.—Bids until May 2 to construct 14.5 mi. road from Goodwater to Kellyton and part of road between Goodwater and Ashland and Goodwater and Sylacauga; Coosa County; 135,000 sq. yds. bituminous macadam; plans, etc., on file. (See Construction News—Road and Street Construction.)

Road Construction.—Abbeville County Highway Comn., L. W. Keller, Secy., Abbeville, S. C.—Bids until April 8 to construct 7.1 mi. top-soil road from city limits to Greenwood county; H. B. Humbert, County Engr. (See Construction News—Road and Street Construction.)

Road Forms.—J. S. Holloway Construction Co., Hattiesburg, Miss.—Road forms.

Road Grader.—City of Vicksburg, Miss., J. J. Hayes, Mayor.—Bids opened for the purchase of gasoline or kerosene propelled road grader, or road machine or road maintainer.

Rolling Partitions.—Rev. J. T. Watson, 503 St. Augustine St., Lynchburg, Va.—Correspondence with manufacturers of horizontal rolling partitions.

Roofing (Metal and Paper).—C. J. Mulkey, Westminster, S. C.—Samples and prices on metal and paper roofing.

Sash (steel).—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Steel sash and casement sash. (See Building Material.)

Scrapers.—Jesse L. Rogers, LaFollette, Tenn.—Scrapers.

Seating.—S. N. Varnell, Cleveland, Tenn.—Chairs for Sunday school rooms. (See Contracts Awarded, Churches.)

Seawall Construction.—Hillsborough County Comms., Charles T. Friend, Chrmn., Tampa, Fla.—Bids until April 24 to construct Bayshore Blvd. seawall at Sulphur Springs; plans with Clk. of Circuit Court.

Sewer.—Town, J. P. Russell, Clk. Lumberton, N. C.—Bids until April 18 to extend sewer and water mains; 4 mi. of 8 in. to 30 in. sewers; 5½ mi. of 1½ in. 6 in. and 10 in. water main extension; 500,000 gal. concrete reservoir; plans and specifications from The Carolina Engineering Co., 412 Southern Bldg., Wilmington, N. C. (See Construction News—Sewer Construction.)

Sewer Construction.—City, W. R. Barringer, Mayor, Florence, S. C.—Bids until Apr. 20 to construct 21,000 lin. ft. of storm drains, 8 to 66 in. in diameter, with necessary manholes, catch basins, etc.; plans and specifications on file at office of Adams & Ervin, Resident Engrs., Barringer Bldg., Florence, and at office of Nisbet Wingfield, Const. Engr., 814 Lamar Bldg., Augusta, Ga. (See Construction News—Sewer Construction.)

Sewer Construction.—City, S. D. Newton, Civil and Municipal Engr., Cleveland, Tenn.—Bids until April 19 to construct 3000 lin. ft. of 12 in. 2330 lin. ft. of 15 in., 3025 lin. ft. of 12 in. and 600 lin. ft. of 24 in. storm sewers; 84 storm inlets; 13 manholes, etc.; plans and specifications on file. (See Construction News—Sewer Construction.)

Sewer Construction.—Washington Suburban Sanitary Comsn., Evans Bldg., New York Ave.—Bids until April 17 to construct 12,200 ft. of 10 to 18 in. sewers and appurtenances; Contract 27-S; plans from Robert B. Morse, Ch. Engr. of Dist. Hyattsville, Md. (See Construction News—Sewer Construction.)

Sewer Construction.—City Comms., Geo. Ansel, Chrmn., Walhalla, S. C.—Bids until April 14 to construct complete sewerage and water system; cost \$110,000; plans, etc. on file; Ryan Engineering Co., Engr., 20 Arcade Bldg., Columbia, S. C. (See Construction News—Sewer Construction.)

Sewer Construction.—City, J. N. Landers, Pur. Agt., Atlanta, Ga.—Bids opened April 3 to construct Highland Ave. trunk sewer from Station 38-60 to Station 63-10 and Ponce de Leon and Angier Ave., connecting sewer; specifications at office of Pur. Agt. (See Construction News—Sewer Construction.)

Sewer Construction.—City, P. A. Poag, Secy. Monroe, La.—Bids opened April 3 to construct 56 inlets in connection with paving Jackson St. 1000 ft. 12 in., 1600 ft. 15 in. and 600 ft. 18 in. pipe; 1500 lin. ft. headers, etc.; plans etc.; on file with R. S. Reynolds, City Engr. (See Construction News—Sewer Construction.)

Sewer Construction.—Town, S. H. Monger, Recorder, Lenoir City, Tenn.—Bids opened April 3 to construct sanitary sewer system; 38 manholes, depth 0-4, 58,954 lin. ft. 8 in. pipe; 41 manholes, 4-6 depth, 4771 lin. ft. 12 in. pipe, 39 manholes, 6-8 depth, 1945 lin. ft. 18 in. pipe, 15 manholes, 8-10 depth, 3850 lin. ft. 24 in. pipe, 2 manholes 10-12 depth; 7 manholes, 15-16 depth, 900 8-in. Y's; 125 cu. yds. of concrete and septic tank mixed 2-4; 5000 lbs. reinforced steel; trenching 10,513 lin. ft. 8 in. pipe, cut 0-4, 13,626 lin. ft. 8 in. pipe, cut 4-6, 9760 lin. ft. 8 in. pipe, cut

6-8, 6214 lin. ft. 8 in. pipe, cut 8-10; and various other pipe varying in sizes and quantities from 2314 lin. ft. 8 in. pipe, cut 10-12 depth to 877 lin. ft. 24 in. pipe, cut 4-6; one coffer dam, approximate length, 200 ft.; 146 lin. ft. cast iron pipe; concrete in outfall 170 cu. yds. plans, specifications, etc. on file at City Hall. (See Construction News—Sewer Construction.)

Sewer Construction.—City, J. N. Landers, Pur. Agt., Atlanta, Ga.—Bids opened April 3 to construct approximately 2236 lin. ft. of trunk sewer from Southern Railroad culvert, south; specifications on file at office of Pur. Agt. (See Construction News—Sewer Construction.)

Sewing Machines.—Clyde West, Williston, North Dakota.—Names and addresses mfrs. of machines used in mfr. of overalls, jackets, canvas gloves, shirts, etc., including sewing machines.

Shears (Squaring).—James B. Porter, Box 255, Norfolk, Va.—Pair tinnners squaring shears to cut up to 20 gauge; second-hand.

Shovel or Road Crane.—Henry Lewis & Co., Commercial Trust Bldg., Philadelphia, Pa.—Gasoline or electric driven, full revolving shovel or road crane on caterpillars with ¾ yd. clam shell bucket.

Shovel (Steam).—W. R. Taylor, Room 200, 919 Baltimore Ave., Joplin, Mo.—Steam shovel.

Skidder.—R. P. Johnson, Wytheville, Va.—Lidgerwood overhead skidder full swing boom, twin engine.

Socks.—Marine Corps, Quartermaster's Dept., Washington, D. C.—Bids until Apr. 8 to furnish 60,000 prs. light weight woolen socks; delivery to Depot Quartermaster, U. S. Marine Corp., Philadelphia, Pa.; Sch. No. 283; information on application to 1100 S. Broad St., Philadelphia.

Sour Kraut Machinery.—Fort Meade Developing Board, Fort Meade, Fla.—Data and prices on mch. for mfr. of sour kraut.

Structural Steel.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Structural steel. (See Building Material.)

Tanks.—Star Service Co., 203 22nd. Ave., Meridian, Miss.—Tanks for 2 filling stations. (See Construction News—Motor Cars, Garages, Tires, etc.)

Tank.—A. P. Cobb, Mayor, Karnes City, Tex.—Bids until April 18 to furnish and erect elevated steel tank, height 100 ft., capacity 50,000 gals.; plans with Terrell Bartlett, Engr., Calcasieu Bldg., San Antonio, Tex.

Tanks (Gas).—G. E. Harrison, Crossville, Tenn.—To purchase gas tank for 50 x 90 ft. garage. (See Construction News—Motor Cars, Garages, Tires, etc.)

Tanks and Agitators.—B. R. Stone, Mgr., American Products Corp., Reidsville, N. C.—Prices on 300 to 500 gal. capacity tanks and agitators. (See Construction News—Miscellaneous Factories.)

Terra Cotta.—J. L. Robinson Construction Co., 1130 W. Lafayette Ave., Baltimore, Md.—Architectural terra cotta and terra cotta partitions. (See Building Material.)

Tile.—Fred S. Campbell, 908 Pickens St., Columbia, S. C.—Interior tile. (See Buildings Proposed—Dwellings.)

Tile (Roofing).—L. C. Fallin, Plant City, Fla.—Prices and samples on tilt roofing.

Tipple Equipment.—Wm. Herbert, Sturgis, Ky.—Prices on barges and tipple equipment for coal mines.

Towels (Bath) and Sheets.—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on bath towels and sheets, in lots of 200 and 400; immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Tower.—Massell Realty Co., Atlanta, Ga.—Tower for office and store building. (See Buildings Proposed—Bank and Office.)

Transparent Covers (Boxes).—J. H. Sumner, 11½ Willoughby Beach, P. O. Norfolk, Va.—Glass or other transparent covers for 4½ x 10-in. boxes; to correspond with mfrs. or dealers.

Tubs (Bath).—E. J. Hoffman, Box 877, Tulsa, Okla.—Prices on 25 vitrolite or porcelain bath tubs, sizes 5½ ft., immediate delivery. (See Construction News—Miscellaneous Enterprises.)

Wall Board.—C. J. Mulkey, Westminster, S. C.—Pulp wall board.

Water.—Town, J. P. Russell, Clk., Lumberton, N. C.—Bids until Apr. 18 to extend water and sewer system; 5½ mi. of 1½ in. 6 in. and 10 in. mains for water works; 500,000 gal. concrete reservoir; 4 mi. of 8 in. to 30 in. sewers; plans and specifications from The Carolina Engineering Co., 412 Southern Bldg., Wilmington, N. C. (See Construction News—Water Works.)

Water Works.—P. D. Gold, Mayor, Seabreeze, Fla.—To correspond with contractors and engineers for construction of \$55,000 water works system.

Washers (Log).—Duncan Machinery Co., 721 N. Central St., Dempster Bldg., Knoxville, Tenn.—Jobbers prices on both new and second-hand log washers, washing logs at saw mill plants in the woods.

Water Pipe.—Otis B. Lackey, Mgr., Morganton, N. C.—Prices on 10 in. and 12 in. iron pipe for laying about 12 mi. of pipe line for water works system costing about \$200,000. (See Construction News—Water Pipe.)

Water Storage System.—W. H. St. Clair, 1217 Lewis St., Charleston, W. Va.—Water storage system. See Refrigerating Equipment.

Water Works.—City Comms., Geo. Ansel, Chrmn., Walhalla, S. C.—Bids until April 1 to construct complete water and sewerage system; cost \$100,000; plans, etc. on file; Ryan Engineering Co., 20 Arcade Bldg., Columbia, S. C. (See Construction News—Water Works.)

Wax Machines.—Trinity Wax Paper Co., R. G. Smythe, Mgr., 3008 Williams St., Dallas, Tex.—Prices on wax machines for plant with 4 ton daily capacity, printed and plain wax paper. (See Paper Plant Equipment.)

Winders, etc.—Trinity Wax Paper Co., R. G. Smythe, Mgr., 3008 Williams St., Dallas, Tex.—Prices on winders, etc. for plant with daily capacity of 4 tons printed and plain wax paper. (See Paper Plant Equipment.)

Wireless Telephone Outfit.—Arthur Reid, Winston-Salem, N. C.—To correspond with mfrs. of wireless telephone outfit.

Financial News

New Financial Corporations.

Ark., Cotton Plant—Farmers National Bank will organize with \$25,000 capital.

D. C., Washington—Realty Finance & Investment Co., 523 Bond Bldg., capital \$1,000,000, inceptd. with W. Gilbert Dent, Prest.; Dale S. Venable, V.-P.; Henry T. Boswell, Secy.-Treas.

Fla., Miami—Becayne Trust Co., capital \$100,000, inceptd. with Jas. H. Gilman, Prest.; John B. Reilly, V.-P.; M. H. Hallman, Secy.-Treas.

Ky., Wallins Creek—Wallins National Bank, capital \$25,000, will organize with W. K. Howard.

Mo., St. Louis—St. Louis National Bank will organize with \$200,000 capital; succeeds Union Trust Co.

Mo., St. Louis—Wm. R. Compton, Prest. American Trust Co., applied for charter for institu-

tion to be known as St. Louis Joint Stock Land Bank with capital of \$250,000.

Mo., St. Louis—St. Louis National Bank, applied for charter with \$200,000 capital; officers as follows: Thos. N. Karraker, Prest. Fred. Wehmiller, -VP.; Ray R. Karraker, Secy.-Treas.

Okla., Ada—Security National Bank, conversion of Security State Bank, capital \$100,000, chartered with H. W. Wells, Prest.; Leslie Prince, Cashier.

Okla., Carter—First National Bank, conversion of First State Bank, capital \$25,000, chartered with E. K. Thurmond, Prest.; J. C. MacKenzie, Cashier. (Lately noted.)

Okla., Coyle—First National Bank, conversion of Peoples State Bank, capital \$25,000, chartered with M. E. Fruin, Prest.; Nona M. Fruin, Cashier.

Okla., Hastings—Oklahoma National Bank, conversion of Oklahoma State Bank of Hastings, \$25,000 capital.

Okla., Ninnekah—First National Bank, conversion of Citizens State Bank of Ninnekah, \$25,000 capital.

Okla., Olney—Farmers State Bank, capital \$6,000 inceptd., with G. H. Roach, Prest.; M. D. Wolverton, Cashr.

S. C., Spartanburg—Carolina National Bank, conversion of Bank of Spartanburg, capital \$200,000, chartered with Wm. S. Glenn, Prest.; J. Wirron Wilson, Cashier.

Tex., Austin—Bartlett Building & Loan Assn., capital \$500,000, inceptd. by E. M. Wilson, G. A. Lindeman and J. K. Knight.

Tex., Beaumont—Texas National Bank, capital \$250,000, inceptd. with Frank Albey, Prest.; H. W. Gardner, Cash.

Va., Norfolk—Seaboard National Bank, capital \$1,400,000, organized with J. B. Moss, Prest.; R. W. Dudley, Cashier; consolidation of Seaboard National Bank and Continental Trust Co.

Va., Roanoke—Roanoke Insurance Agency chartered with John C. Parrott; Prest.; F. B. Wilson, Secy.

Va., Victoria—First National, conversion of Virginian Bank of Commerce, capital \$25,000; L. D. Hatch, Cashier, Virginian Bank of Commerce.

New Securities.

Ala., Anniston—Street—City, H. B. Rudisill, Mayor, sold \$80,000 of 6 per cent semi-annual \$1000 denomination bonds, dated March 1, 1922, to Ward, Sterne & Co., Birmingham, Ala. (Lately noted inviting bids.)

Ala., Andalusia—School—City voted \$67,500 bonds. Address The Mayor. (Lately noted to vote.)

Ala., Birmingham—Market—City, D. E. McLendon, Prest. Comsn., awarded \$300,000 of 5 per cent bonds, dated Apr. 1, 1922, jointly to Caldwell & Co., Nashville, Tenn., and Stelner Bros., Birmingham, at 100.270. (Lately noted inviting bids.)

Ala., Clayton—Road — Barbour County Board of Revenue sold \$75,000 of 6 per cent bonds to Caldwell & Co., Birmingham, Ala.

Ala., Decatur—Road—Morgan County will receive bids Apr. 12 on \$440,000 bonds. Address County Commrs.

Ala., Dothan—Paving—City sold \$120,000 bonds to Weil Roth & Co., Cincinnati, O.

Ala., Edmondton—City Commr. C. J. Yorath, will receive bids until Apr. 10 on \$870,000 of 6 per cent semi-annual 30-yr. bonds.

Ark., Fayetteville—Water-Works—I. K. Nakdi-

men, Prest. City National Bank, Fort Smith, Ark., purchased extension bonds.

Ark., Fort Smith—School—Board of Education, C. J. Tidewell, Supt., will sell Apr. 15, \$100,000 of 5 per cent Fort Smith School Dist. bonds.

Ala., Gadsden—School—City voted \$250,000 of 6 per cent 30-yr. bonds. Address The Mayor. (Lately noted to vote.)

Ark., Marion—Road—Crittenden County Commrs. Road Dist. No. 6 sold \$350,000 bonds to Bank of Commerce and Trust Co., Memphis, Tenn.

Ark., Pine Bluff—Drainage—Salt Bayou Drainage Dist. of Jefferson and Arkansas Counties, W. C. Hudson, Secy. Commrs., will sell on Apr. 18, \$425,000 of 6 per cent semi-annual serial 5 to 25-yr. bonds, dated May 1, 1922; further information from Parkes Engineering Co., Pine Bluff. (Lately noted.)

Fla., Brooksville—Hernando County sold to Mickler & McLeod, Tampa, Fla., \$60,000 time warrants at par value and accrued interest.

Fla., Clearwater—Paving, Sewer, Water, City Hall and Funding—City, J. R. Thomas, Clk., will receive bids until Apr. 19 on following 6 per cent 30-yr bonds: \$85,000 street paving, \$25,000 sewer extension, \$40,000 water, \$50,000 city hall and \$40,000 funding. (Lately noted voted bonds.)

Fla., Clermont—City will vote on about \$105,000 bonds for paving 23 blocks; Address The Mayor.

Fla., Fort Pierce—School—Saint Lucie Board of Public Instruction, E. E. Smith, Supt., will receive bids until Apr. 22 on \$18,000 of 6 per cent semi-annual \$1000 denomination bonds.

Fla., Haines City—Water, Sewer and Fire Equipment—Town, Jed R. Yale, Clk., will receive bids until Apr. 24, on following bonds: \$50,000 water; \$15,000 sewerage and \$10,000 fire equipment; all 6 per cent semi-annual, \$1000 denomination, dated Apr. 1, 1922. (Lately noted voted bonds.)

Fla., Leesburg—City, Board Bond Trustees sold \$125,000 of 5 per cent \$1000 denomination, 30-yr. bond, dated July 1, 1921, to Atlantic National Bank, Jacksonville, Fla. (Lately noted inviting bids.)

Fla., Pablo Beach—Electric—City voted \$38,000 transmission bonds; J. A. Bussey, Mayor. (Lately noted.)

Fla., Palmetto—Fire Equipment—City, W. E. Mann, Clk., voted Apr. 3 on \$7500 of 6 per cent bonds.

Fla., St. Petersburg—Street—City plans issuing 6 per cent improvement bonds; E. C. Garvin, Director of Public Works.

Fla., Starke—Road—Bradford County, C. A. Frutch, Secy. Board Bond Trustees, will receive bids until May 2 on \$550,000 of 6 per cent bonds. (Lately noted receiving bids Mar. 15.)

Fla., West Palm Beach—City Comsn. will receive new bids on \$350,000 bonds.

Fla., West Palm Beach—Road—Palm Beach County Commrs. Road and Bridge Dist. No. 2 sold \$78,000 of 6 per cent bonds to Farmers Bank and Trust Co., West Palm Beach, at 95.02.

Ga., Atlanta—School—Fulton County will vote May 9 on \$500,000 bonds. Address Board of Education. (Lately noted.)

Ga., Athens—School—City, Geo. C. Thomas, Mayor, plans issuing about \$200,000 bonds.

Ga., Jackson—Road—Butts County voted \$150,000 bonds. Address County Commrs.

Ga., Tifton—School—Board of Trustees Omega School Dist. will vote Apr. 6 on \$15,000 bonds.

Ky., Carrollton—City, J. E. Gullion, Mayor will receive bids until April 12 on \$18,000 of

6 per-cent semi-annual \$500 denomination bonds, dated Jan. 1, 1922.

Ky., Williamstown—Road—Grant County voted \$250,000 bonds. Address County Commrs. (Lately noted to vote.)

La., Bastrop—School—Morehouse Parish, Johnson School Dist. will vote April 11 on \$18,000 bonds.

La., Donaldsonville—Road and Refunding—Ascension Parish voted \$100,000 of 6 per cent 25-yr. Third Road Dist. and \$67,000 refunding bonds. Address Police Jury.

La., St. Francisville—Road—West Feliciana Parish Police Jury will sell bonds.

La., Haynesville—School—City voted \$125,000 bonds. Address The Mayor.

La., Houma—Electric and Water—City, H. M. Bourg, Mayor, voted \$200,000 electric and water bonds. (Lately noted to vote.)

La., Lake Charles—Waterway—Calcasieu Parish Police Jury will vote June 13 on \$2,750,000 bonds. (Lately noted.)

La., Napolionville — Road — Assumption Parish Police Jury contemplates issuing \$300,000 bonds.

La., New Roads — Road—Pointe Coupee Parish Police Jury sold bonds as follows: Prudden & Co., Toledo, O., represented by Thos. E. Furrow, New Orleans, La., \$73,000 Road Dist. No. 6; Sutherland-Barry & Co., New Orleans, La., \$115,000 Dist. No. 2; \$47,500 Dist. No. 4 and \$100,500 Dist. No. 6 bonds. (Lately noted inviting bids.)

La., Thibodaux—Road—Lafourche Parish Police Jury will receive bids until April 26 on \$50,000 Dist. No. 1 bonds; Chas. J. Coulon, Clk. (Lately noted.)

Md., Ellicott City—Legislature authorized Howard County to issue \$600,000 bonds. Address County Commrs.

Md., Chestertown—Legislature authorized city to issue \$50,000 bonds. Address Commrs.

Md., Garrett Park—Legislature authorized city to issue \$25,000 bonds. Address Commrs.

Md., Havre de Grace—Legislature authorized city to issue \$35,000 bonds. Address Commrs.

Md., La Plata—Legislature authorized Charles county to issue \$17,000 bonds. Address County Commrs.

Md., Port Deposit—Improvement—Legislature authorized town to issue \$15,000 general improvement bonds. Address The Mayor.

Md., Princess Anne—Legislature authorized city to issue \$40,000 bonds. Address Commrs.

Md., Rock Hall—Legislature authorized city to issue \$13,000 bonds. Address Commrs.

Md., Westminster—Legislature authorized Carroll County to issue \$700,000 bonds. Address County Commrs.

Miss., Utica—Electric—City voted bonds. Address The Mayor.

Miss., Taylor—School—Taylor Consolidated School Dist., Beat No. 4, votes April 1' on \$14,500 bonds.

Mo., Caruthersville—Drainage—Board of Suprvs. Elk Chute Drainage Dist., J. C. Mallaure, Secy.-Treas. received bids Apr. 5 for \$250,000 of 6 per cent 20-yr. bonds.

Mo., Jefferson City—Bridge, Tunnel, Indebtedness, City and Sewer—Mayor Hunt sold to First National Bank at 100.12, \$1000 Elm St. bridge reconstruction, \$21,000 Miller St., tunnel construction, and \$11,000 Miller St., tunnel extension, \$2000 storm sewer construction, and \$49,000 indebtedness bonds; all 6 per cent \$500 denomination, 10-20 yr. bonds, dated Mch 1, 1922. (Lately noted inviting bids.)

Mo., Lebanon—Fire Equipment—City will vote Apr. 18 on \$18,000 bonds. Address The Mayor.

Mo., Mountain Grove—Improvement and Indebtedness—City will vote Apr. 18 on \$35,000 bonds. Address The Mayor.

N. C., Asheville—School—Buncombe County Comms., Geo. A. Diggs, Jr. Clk. will receive bids until April 24 on \$35,000 of 6 per cent semi-annual \$1000 denomination Candler Special School Tax. Dist. bonds, dated Mch. 1, 1922, maturing Mch. 1, 1942.

N. C., Bailey—Electric Light—Town, Hoke Smith, Clk., received bids Apr. 4, \$20,000 of 6 per cent, \$1,000 denomination, bonds, dated May 1, 1922.

N. C., Beaufort—Road—Carteret County, W. L. Stancil, Auditor, will receive bids until Apr. 22 on \$150,000 of 6 per cent semi-annual 1½-yr. bonds. (Lately noted.)

N. C., Chapel Hill—Improvement and Funding—City, C. B. Griffin, Clk.-Treas. received bids April 4 on \$31,000 of 6 per cent semi-annual \$500 denomination improvement bonds, dated Jan. 1, 1922, and \$3500 of \$500 denomination refunding bonds, dated Jan. 1, 1922.

N. C., Goldsboro—Street—City, J. G. Tyson, Clk., received bids April 3 on \$180,000 semi-annual \$1000 denomination bonds, dated Apr. 1, 1922.

N. C., Graham—School—Alamance County sold \$50,000 bonds to Prudden & Co., Toledo, O., at premium of \$1,375. Address Board of Education.

N. C., Greenville—Drainage—Pitt County Drainage Dist. No. 2, Comms. will receive bids until Apr. 12 on \$168,000 of 6 per cent semi-annual serial bonds; Geo. T. Leach, Chrmn., Washington, N. C.; F. M. Wooten, Attorney, Greenville, N. C.

N. C., Hendersonville—Refunding, Funding and Water Funding—City, G. W. Brooks, Clk., received bids March 31 on following 6 per cent bonds: \$12,000 refunding, \$15,000 funding and \$22,000 water funding; all semi-annual \$1,000 denomination; dated Apr. 1, 1922.

N. C., Hickory—Funding—City, R. G. Henry, Mgr.-Clk., sold \$45,000 of 6 per cent semi-annual \$1,000 denomination bonds, dated Apr. 1, 1922, to Seasongood & Mayer, Cincinnati, O., at 104.04. (Lately noted inviting bids.)

N. C., Lexington—School—Davidson County, Emmons Township Public School Dist., will vote Apr. 18 on \$30,000 bonds.

N. C., Lexington—School—City plans voting about May on \$225,000 bonds. Address The Mayor.

N. C., Middlesex—Electric—Town, H. R. Knight, Clk., received bids Apr. 4 on \$20,000 of 6 per cent \$1,000 denomination bonds, dated May 1, 1922.

N. C., Monroe—Road and Bridge—Union County Comms. sold \$250,000 of 6 per cent semi-annual \$1000 denomination bonds, dated March 1, 1922 to Spitzer, Rorick & Co., Toledo, O.; M. C. Long, Clk. (Lately noted inviting bids.)

N. C., New Bern—Street—City plans voting on \$150,000 bonds; Edward Clark, Mayor.

N. C., Pittsboro—Electric—Town, Daniel L. Bell, Secy. receives bids April 5 on \$15,000 of 6 per cent semi-annual \$500 denomination bonds, dated Jan. 1, 1922.

N. C., Rocky Mount—Street, Sewer and Water—City, C. H. Harris, Clk., sold \$325,000 of 5½ per cent \$1000 denomination, 7½-yr. bonds dated Apr. 1, 1922, to Tucker Roberson & Co., Toledo, O. (Lately noted inviting bids.)

N. C., Shelby—Road and Hospital—Cleveland County Comms. will receive bids until April 17 on \$50,000 of 6 per cent semi-annual, \$500

denomination road bonds, dated July 1, 1918, \$15,000 6 per cent semi-annual \$100 denomination road bonds, dated May 1, 1922 and \$100,000 of 6 per cent semi-annual hospital bonds of Township, No. 6, dated May 1, 1922; R. L. Weathers, Clk.

N. C., South Hill—Water, Light and Sewer—Town, N. C. Smith, Clk., will receive bids until May 1 on \$100,000 of 6 per cent semi-annual \$1000 denomination bonds, dated May 1, 1922.

N. C., Tarboro—Bridge—Edgecombe County, Jno. A. Weddell, County Auditor; sold \$100,000 of 5½ per cent \$1000 denomination bonds, dated Jan. 1, 1922, to Farmers Banking & Trust Co., Tarboro, N. C., at premium \$3761. (Lately noted inviting bids.)

N. C., Waynesville—Paving—City, J. H. Howell, Mayor, contemplates issuing \$150,000 bonds.

Okla., Avant—School—City voted \$10,000 bonds. Address The Mayor.

Okla., Grove—School—School Dist. No. 17 contemplates voting on about \$30,000 bonds. Address Board of Education.

Okla., Okemah—Road—Okfuskee County Comms. voted \$500,000 bonds. (Lately noted to vote.)

Okla., Oklahoma City—School—Comms. A. S. J. Shaw, Secy. Land Office sold \$437,000 bonds; will sell \$100,000 home loan bonds.

Okla., Oklahoma City—State Comms. of Land Office, A. S. J. Shaw, Secy., received bids March 28 on \$100,000 of 5 per cent semi-annual loan fund bonds.

Okla., Oklahoma City—School—State Comms., Land Office, A. S. J. Shaw, Secy., receives bids on \$968,400 of 5 and 6 per cent bonds.

Okla., Tulsa—School—Tulsa and Osage Counties Consolidated School Dist. No. 2, sold \$35,000 of 6½ per cent bonds to Commerce Trust Co., Kansas City, Mo.

Okla., Tulsa—Water—City, C. S. Younkman, Water Commr., will receive bids Apr. 11 on \$6,800,000 bonds; T. D. Evans, Mayor. (Lately noted voted bonds.)

Okla., Wilburton—Sewer, Electric and Fire Fighting Equipment—City voted \$201,000 bonds. Address The Mayor.

S. C., Anderson—School—E. Crayton McCants, School Supt., contemplates issuing \$200,000 bonds.

S. C., Charleston—Port Utilities—City sold \$2,500,000 of 4½ per cent \$1000 denomination 40-yr. bonds to Wm. R. Compton Co., and Bankers Trust Co., both New York, at 98.68. (Lately noted inviting bids.)

S. C., Charleston—Road and Bridge—Charleston Sanitary and Drainage Comsn., Jas. D. Leseman, Chrmn., sold \$250,000 of 6 per cent semi-annual \$1,000 denomination bonds, dated Jan. 1, 1922, maturing Jan. 1, 1937, to S. C. Loan & Trust Co., Charleston. (Lately noted inviting bids.)

S. C., Easley—School—Easley School Dist. No. 13, J. R. Martin, Chrmn. received bids Apr. 4 on \$50,000 of a 5 per cent semi-annual \$1,000 denomination bonds, dated Apr. 1, 1922. (Lately noted.)

S. C., Hampton—Indebtedness—Hampton County Comms., Hugh O. Hanna, County Auditor, will receive bids until Apr. 15 on \$63,000 of 6 per cent semi-annual bonds.

S. C., Orangeburg—Paving—City sold \$250,000 of 5½ per cent semi-annual bonds to Southern Bank and Trust Co., at \$252.750. (Lately noted inviting bids.)

S. C., Saint George—Road—Dorchester County Highway Comsn. C. H. Parler, Secy. sold \$50,000 of 6 per cent semi-annual \$1000 denomination bonds to Weil, Roth Co., Cincinnati, O. (Lately noted inviting bids.)

S. C., Winnsboro—School—City sold \$100,000 of 6 per cent bonds to Roth & Co., Cincinnati, O.

Tenn., Henderson—Road—Chester County sold \$90,000 of 5½ per cent bonds, dated July 1, 1920, to Elston & Co., Chicago, Ill., at 100.27. Address County Comms.

Tenn., Johnson City—School—City will vote May 3 on \$125,000 bonds. Address The Mayor.

Tenn., Memphis—Jail—Shelby County Court, E. E. Strong, Chrmn., received bids Apr. 4 on \$200,000 of 4½, 5, 5½ and 5½ per cent \$1,000 denomination, bonds, dated March 1, 1922.

Tenn., Rossville—Water—City, Roy McFarland, Mayor, voted \$30,000 bonds.

Tenn., Wartburg—Road—Morgan County Court authorized \$200,000 bonds.

Tex., Ballinger—School—State Comptroller, Austin, Tex., registered \$10,000 of 5 per cent 10-40-yr. bonds Runnels CCounty Common School Dist. No. 46.

Tex., Baird—Water—W. L. Slaton & Co., Toledo, O., purchased \$60,000 of 6 per cent bonds. (Lately noted.)

Tex., Bay City—Road and Bridge—Matagorda County Comms., Amos Lee, Auditor, will receive bids until Apr. 11 on \$30,000 of 6 per cent semi-annual bonds.

Tex., Beaumont—Road—Jefferson County sold \$2,000,000 of 5 per cent semi-annual bonds to J. T. Bowman, Austin, Tex., representing Taylor, Ewart & Co., Chicago; Mississippi Valley Trust Co., St. Louis, Mo.; Detroit Trust Co., Detroit, Mich.; Kaufman-Smith-Emert Co., St. Louis, Mo.; Lorenzo E. Anderson & Co., St. Louis, Mo.; A. B. Leach & Co., Chicago, and Halsey, Stuart & Co., Chicago, at par, less accrued interest. (Lately noted inviting bids.)

Tex., Breckenridge—Street—City sold \$330,000 of 6 per cent bonds to Blanton Banking Co., Houston, Tex.

Tex., Clarendon—Water-Works—City will vote Apr. 11 on \$75,000 improvement bonds; W. D. Howren, Engr.

Tex., Edinburg—Road—Hidalgo County Comms. Court sold \$1,250,000 bonds to J. L. Arlitt, Austin, Tex.

Tex., Edinburg—Road—J. L. Arlitt, Austin, Tex., purchased \$1,250,000 of 5½ per cent Hidalgo County bonds.

Tex., Fort Stockton—Water-Works—City Secy., received bids Apr. 4 on \$75,000 of 6 per cent 10-40-yr. bonds.

Tex., Garland—Sewer and Water—Attorney General, Austin, Tex. approved \$29,000 sewer and \$68,000 water bonds; 6 per cent serial.

Tex., Georgetown—Street and Fire Equipment—City voted \$100,000 bonds, including \$85,000 street and \$15,000 fire equipment. Address The Mayor. (Lately noted to vote.)

Tex., Houston—Paving, Sewers, Bridges, Library and Hospital—City, O. F. Holcombe, Mayor, will vote Apr. 29, on \$1,550,000, including \$750,000 for street paving; \$250,000 for sanitary sewers; \$250,000 for bridges; \$200,000 for library; \$100,000 for hospital. (Lately noted.)

Tex., Jacksonville—School—Breg, Garrett & Co., Dallas, Tex., purchased \$45,000 of 5 per cent \$1000 denomination 20-yr. Independent School Dist. bonds, dated Feb. 1, 1921.

Tex., Marlin—Water-Works—State Comptroller, Austin, Tex., registered \$25,000 of 5½ per cent 10-40-yr. bonds.

Tex., Minden—School—State Comptroller, Austin, registered \$10,000 of 5 per cent 10-40-yr. Independent School bonds.

Tex., Newton—Road—Newton County, J. E. Roush, County Judge, will receive bids until Apr. 10 on following 5½ per cent bonds:

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Barrett Specification Roofs

Bonded for
20 and 10
Years



This wearing surface is "Fire Insurance" and "Life Insurance" for the Roof—

THE illustration shows the final operation in the laying of a Barrett Specification Roof—the pouring of the top coat of hot Specification Pitch and the spreading of the thick wearing surface of gravel or slag, after the entire roof has received the required number of plies of felt and pitch.

This wearing surface is *fire insurance* for the roof, because it provides a high degree of fire resistance. When burning brands fall on the slag or gravel surface, they do no serious damage. This is one of the reasons why the National Board of Fire Underwriters gives Barrett Specification Roofs the base rating.

This wearing surface is *life insurance* for the roof, because it holds in place and permits applying twice as much

waterproofing material as would otherwise be possible. The top coat of roofing pitch is extra heavy. It is always *poured* on—not mopped.

Pitch is used, because of its elasticity and proved superiority as a waterproofing material.

Barrett Specification Roofs are bonded against roof repair expense—Type "AA" for 20 years, Type "A" for 10 years.

Copies of the Barrett Specification sent free on request.

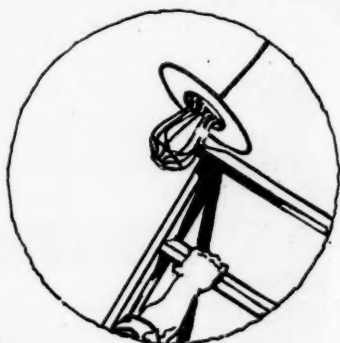
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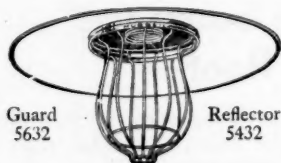
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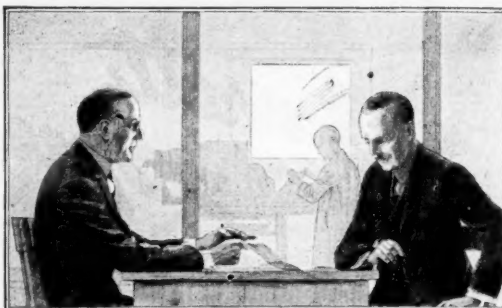
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Investing in the South's Prosperity

Investors in every state and in a number of foreign countries are showing their confidence in Southern stability and prosperity by buying Miller First Mortgage Bonds in larger amounts than ever before.

The need of new buildings to house the South's growing business and growing city population furnishes a strong basis of security for these bonds, secured by first mortgages on income-earning structures.

A Stream of Good Investments, Secured by Good Buildings

The bond issues listed here have been sold in recent months. Some were sold before we could publish the advertisements we had prepared. With an unbroken safety record, and yielding the high return of 8%, Miller Bonds are making an increasingly powerful appeal to investors everywhere.

Every issue of Miller Bonds is protected by the same safeguards. Some of these are illustrated in the bonds briefly described below.

\$350,000

**First Mortgage Bonds Secured by
Harvey Apartment Structure
Indianapolis, Ind.**

Earnings of this building have been carefully estimated at $2\frac{1}{2}$ times the largest amount of interest due in any year. Ample earnings, which frequently exceed our estimates, protect holders of Miller Bonds.

\$160,000

**First Mortgage Bonds Secured by
Berkeley Court Apartments
Charleston, S. C.**

Payment of principal and interest (as in the case of all our issues) is provided for by monthly payments by the borrower. The payments in the case of the Berkeley Court Apartments range from \$933.33 to \$2,992, and assure the Trustee of having funds on hand in advance to meet interest and principal.

\$160,000

**First Mortgage Bonds Secured by
Almadura Apartment Building
Memphis, Tenn.**

The property securing this issue is valued at \$320,000. A large excess of property value safeguards every loan we make.

\$125,000

**First Mortgage Bonds Secured by
Bon-Air Apartment Building
Atlanta, Ga.**

These bonds are redeemable at 105 and accrued interest at the borrower's option. Nearly all Miller issues contain this attractive possibility of being paid off at a substantial premium.

\$110,000

**First Mortgage Bonds Secured by
Belmont Apartment Building
Atlanta, Ga.**

This structure is of reinforced concrete fire-proof construction and all modern improvements and conveniences have been provided. Only high grade structures are financed by this firm.

\$300,000

**First Mortgage Bonds Secured by
New Cecil Hotel
Atlanta, Ga.**

This bond issue provided funds for the erection of a nine-story hotel structure, containing 200 rooms—one of the best and largest hotels in the South Atlantic States. The hotel, like all the structures we finance, meets an actual need.

\$120,000

**First Mortgage Bonds Secured by
Belvedere Apartment Building
Atlanta, Ga.**

Through annual payment of a part of the bonds, the property value securing each \$1,000 bond in 1936, the year of final maturity, figures out at \$16,667. All Miller Bonds grow safer as they grow older, through annual repayment of a portion of the bonds.

The decline in interest rates now in progress makes it plain that we will be obliged to reduce the rate of interest on Miller First Mortgage Bonds from the present 8%. In no way could the rate be maintained indefinitely except by lowering the standard of security which we demand, and this we refuse to do. The present return, therefore, offers a passing opportunity for profitable investment, on sound security.

G. L. MILLER & CO.

INCORPORATED

1002 HURT BUILDING

ATLANTA, GA.

"First—the Investor's Welfare"

\$60,000,000

The New York Central Railroad Company

Refunding and Improvement Mortgage 5% Gold Bonds

SERIES C

Dated October 1, 1921

Due October 1, 1913

Interest payable April 1 and October 1 in the City of New York

Redeemable, as a whole but not in part, at the option of the Company, at 105% and accrued interest on, but not before, October 1, 1951, or on any interest date thereafter, on three months' notice.

Coupon Bonds in denomination of \$100 (not registerable) and in denominations of \$1000 and \$500, registerable as to principal. Fully registered Bonds in denomination of \$1000 and authorized multiples thereof. Coupon and registered Bonds interchangeable.

The issuance of these Bonds has been authorized by the Interstate Commerce Commission.

GUARANTY TRUST COMPANY OF NEW YORK, TRUSTEE

A. H. Smith, Esq., President of The New York Central Railroad Company, has summarized as follows his letter to us describing this issue:

The Refunding and Improvement Mortgage Bonds are secured by direct mortgage on all of the railroad owned by The New York Central Railroad Company, the main line of which, extending from New York City to Chicago, is one of the trunk lines of heaviest traffic in the United States.

The property mortgaged includes rolling stock costing in excess of \$134,000,000 which is owned free from equipment lien, and the mortgage will attach to additional rolling stock costing approximately \$135,000,000 upon the payment of outstanding equipment obligations aggregating approximately \$52,000,000.

The Company's investments other than owned road and equipment amount to approximately \$370,000,000, about 80% of which is in affiliated or controlled steam railway properties forming an integral part of the New York Central system. Income received by the Company from these investments in the last seven years averaged 4.67% per annum on the book cost of all of the investments including non-dividend paying stocks.

For the last seven years (i. e., since consolidation with the Lake Shore and Michigan Southern Railway), the Company's net income, after deducting rentals and miscellaneous income charges, averaged \$58,001,400 per annum, as contrasted with \$24,057,985 average annual interest charges on mortgage and other secured debt. Net income in 1921, after deducting rentals and miscellaneous income charges, amounted to \$63,090,362 as compared with \$27,825,969 interest charges on mortgage and other secured debt. Inasmuch as the proceeds of this issue are to be used, in large part, to retire existing debt, the issue of these \$60,000,000 Bonds will increase the annual interest charges of the Company by only about \$160,000. The average interest rate on the Company's mortgaged debt, including the present issue and \$480,161,000 underlying bonds, is slightly less than four per cent.

Since January 1, 1915, the Company has added to surplus approximately \$80,000,000 from current income after payment of dividends on its stock. The Company has additional resources in the undistributed earnings of subsidiary properties, its proportion of the undistributed surplus earned by five principal steam railway subsidiaries during the last seven years amounting to more than \$44,000,000.

The outstanding securities junior to the Refunding and Improvement Mortgage Bonds include \$105,500,000 De-benture Bonds and \$249,597,355 par value of capital stock. For every year since 1869, dividends have been paid at the rate of at least four per cent. per annum; since 1900 the rate has been not less than five per cent. per annum.

In the opinion of counsel, the Refunding and Improvement Mortgage Bonds are a legal investment for savings banks in the states of New York, Massachusetts, Connecticut and Vermont.

THE ABOVE BONDS ARE OFFERED FOR SUBSCRIPTION, SUBJECT TO ISSUE AS PLANNED AND TO THE APPROVAL OF OUR COUNSEL, AT 94½% AND ACCRUED INTEREST, TO YIELD NEARLY 5.30 PER CENT.

Subscription books will be opened at the office of J. P. Morgan & Co., at 10 o'clock A. M., Monday, April 3, 1922. The right is reserved to reject any and all applications, and also, in any case, to award a smaller amount than applied for. The amount due on allotments will be payable at the office of J. P. Morgan & Co., in New York funds, the date of payment to be specified in the notices of allotment, against delivery of temporary Bonds exchangeable for definitive Bonds when prepared.

J. P. MORGAN & CO.

FIRST NATIONAL BANK, New York
GUARANTY COMPANY OF NEW YORK

THE NATIONAL CITY COMPANY
BANKERS TRUST COMPANY, New York

HARRIS, FORBES & CO.

KIDDER, PEABODY & CO.

LEE, HIGGINSON & CO.

New York, April 3, 1922

As all of the above bonds have been sold, this advertisement appears as a matter of record only.

THE BANK OF ALABAMA

ENSLEY, ALABAMA

R. A. TERRELL	President
J. W. MINOR	Vice-President
FOSTER HAMILTON	Cashier

We Solicit Your Business

MARINE BANK & TRUST COMPANY

New Orleans, Louisiana

Capital and Surplus - \$2,300,000.00

General Banking - Domestic and Foreign

Correspondence Invited

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BALTIMORE

Transacts a General Trust and Banking Business

Correspondence and interviews invited

CAPITAL, \$1,000,000

WE BUY MUNICIPAL BONDS

Write us if your community is contemplating issuing bonds or has bonds to sell.

THE W. H. SILVERMAN CO.

309 Mercantile Library Bldg., Cincinnati, Ohio

Seasongood & Mayer
Ingalls Bldg., Cincinnati, O.

BUY County City School BONDS

Write us if you have any for sale.

BLACK & COMPANY

(WILMER BLACK, C. P. A.)

CERTIFIED PUBLIC ACCOUNTANTS

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We FinanceElectric Power and Light Enterprises with Records
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ELECTRIC BOND & SHARE CO.

(Paid-up Capital and Surplus, \$27,000,000)

71 Broadway

New York

ENTIRE BOND ISSUES OF
SUCCESSFUL INDUSTRIALS PURCHASED

Offerings Invited

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Established 1884

Mercantile Trust and Deposit Co.

OF BALTIMORE

A. H. S. POST, President. F. G. BOYCE, JR., Vice-President.

We Buy BondsCity, County, School and Road, from
Municipalities and Contractors

WRITE

THE PROVIDENT SAVINGS BANK & TRUST CO.
CINCINNATI OHIO**WE BUY MUNICIPAL BONDS**We are interested in the purchase of
Southern Municipals including road,
school, county, drainage and levee bonds.**M. W. ELKINS & CO.**

Southern Trust Bldg. Little Rock, Ark.

NOTICE TO CONTRACTORSWe want to buy bonds issued by cities, towns,
counties, school, road or drainage districts that you
may be able to take in exchange for work. Address
us at our nearest office.**W. L. SLAYTON & CO.**

New Orleans, La.	Toledo, Ohio	Tampa, Fla.
Chicago, Ill.	Glasgow, Mont.	

Contractors and Municipal OfficialsWe are always in the market
TO PURCHASEGood municipal bonds issued by cities, towns, counties
and school districts**BREED, ELLIOTT & HARRISON**

322 WALNUT ST. CINCINNATI, OHIO

Agency for Motor Trucks.

Jerome P. Chase, 12 E. Lafayette Ave., Baltimore, Md., has been appointed agent for Atterbury trucks, manufactured by the Atterbury Motor Car Company, of Buffalo, N. Y., and will act as representative in Baltimore and other Southern territory. He is a young man who lost his sight about three years ago, and after treatment at Evergreen, assumed representation of the company in the South, the Baltimore territory now being included also under his charge. The Atterbury trucks are built in four sizes and are fully guaranteed as to materials and construction. During his stay at Evergreen,

Mr. Chase received instructions as to the use of the typewriter so as to enable him to conduct his business correspondence.

New Business Connection.

A. P. Blackstead, formerly chief engineer of the Camden Iron Works, (R. D. Wood & Co.), Camden, N. J., and previously hydraulic engineer with the Henry R. Worthington Company, New York City has joined the engineering staff of the Dayton-Dowd Company, Quincy, Ill., manufacturers of centrifugal pumps and approved underwriters' fire pumps. Mr. Blackstead has had a broad experience on centrifugal pumps covering a

period of over 20 years in this country and abroad. He has recently returned from Europe, where for six months he studied conditions and investigated recent developments in hydraulic engineering.

Pittsburgh Office Moved.

The Hendrick Manufacturing Company, makers of perforated metals, general sheet and light structural iron works, light and heavy steel plate construction, Carbondale, Pa., announces that its Pittsburgh office is now located at 544 Union Arcade Building, this change having been made on April 1.

PATENTS

TRADE-MARKS AND COPYRIGHTS

Before disclosing an invention the inventor should write for our blank form, "EVIDENCE OF CONCEPTION." This should be signed and witnessed, and if returned to us, together with model or sketch and description of the invention, we will give our opinion as to its patentable nature.

Our Illustrated Guide Book, "HOW TO OBTAIN A PATENT," sent Free on request. Contains full instructions regarding Patents and Trade-marks.

VICTOR J. EVANS & CO., - Patent Attorneys

New York Offices Philadelphia Offices Pittsburgh Offices
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TOOL FACTORY FOR BIRMINGHAM

Pig iron of all grades, cheap hydraulic electric power, steel rods and plates, and a splendid freight rate throughout the South, make Birmingham an ideal location for a factory specializing in the making of tools, hoes, forks, etc. Real estate inquiries of all kind solicited.

JEMISON & CO. BIRMINGHAM, ALA.

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

Bids close May 15, 1922.

TREASURY DEPARTMENT, Bureau of Engraving and Printing, Washington, D. C., April 3, 1922. Sealed proposals are invited to furnish this Bureau with Postage Stamp Paper and Internal Revenue Paper, Brass and Iron Castings, Cleaning of Windows, Purchase of Pulp, Ink Scrapings, Distinctive Paper Shredded Trimmings and Postage Stamp and Internal Revenue Paper Trimmings, during the fiscal year beginning July 1, 1922. Proposals to be received not later than 2 P. M., Monday, May 15, 1922. Blank forms with specifications for proposals for the several schedules and further information will be furnished on application to Louis A. Hill, Director.

Bids close May 1, 1922.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., March 27, 1922. SEALED PROPOSALS will be opened in this office at 3 P. M., May 1, 1922, for the construction of 26 buildings for the U. S. Veterans Hospital, Tuskegee, Ala., and separate bids for the mechanical equipment for the same, except elevators and lighting fixtures; all in accordance with drawings and specifications, which may be obtained at this office on or after March 31, 1922, in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect.

Bids close April 21, 1922.

Proposals for oil-handling pump, water-meter testing outfits, long-time burning oil, tires and tubes, brass chain bolts, corn brooms, library paste, and cover paper. Sealed proposals will be received at the Office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 o'clock a. m., April 21, 1922, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and information relating to this circular (1475) may be obtained from this office or the offices of the assistant purchasing agents, 24 State Street, New York City, 611 Gravier Street, New Orleans, La.; and Fort Mason, San Francisco, Calif.; also from the United States engineer offices in the principal cities throughout the United States.—A. L. Flint, General Purchasing Officer.

Bids close April 19, 1922.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., March 21, 1922.—SEALED PROPOSALS will be opened in this office at 3 p. m., April 19, 1922, for the installation complete of one push-button control electric passenger elevator in the Main Building, U. S. Marine Hospital, at Mobile, Ala., in accordance with the drawing and specification, copies of which may be had at this office in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect.

Bids close April 18, 1922.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., March 20, 1922.—SEALED PROPOSALS will be opened in this office at 3 p. m., April 18, 1922, for new steam heating system and plumbing and wiring changes in the main building, U. S. Marine Hospital, Mobile, Ala., in accordance with specifications and drawings, copies of which may be had at this office or at the Office of the Custodian, U. S. Marine Hospital, Mobile, Ala., in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect.

Bids close April 24, 1922.

\$125,000 Bonds For Sale.

Union, S. C.

Notice is given that the County of Union will receive bids for the sale of One Hundred and Twenty-five Thousand Dollars of coupon bonds on the 24th of April, 1922, at 12:00 o'clock noon, in the office of County Supervisor, Union County, S. C. All bidders will be required to deposit with the Supervisor One Thousand Dollars certified check in order to show good faith and as part payment on the bonds. The checks of the unsuccessful bidders will be returned.

G. V. Askew,

Supervisor for Union County.

Bids close April 11, 1922.

County Road Bonds For Sale

Tazewell, Va.

The Board of Supervisors of Tazewell County, Virginia, will receive sealed bids on April 11, 1922, at the Courthouse at Tazewell, Va., for the purchase of County Road Bonds, not less than fifty thousand dollars or more than one hundred and fifty thousand dollars, the issuance of which was authorized by the recent Legislature; said bonds to run not exceeding thirty years. The right is reserved to reject any and all bids.

H. S. SURFACE, Clerk.

Bids close April 18, 1922.

\$80,000 Bonds For Sale

Union, S. C.

The MAYOR AND BOARD OF ALDERMEN of the Town of Union, S. C., pursuant to an ACT of the General Assembly of South Carolina, entitled "AN ACT TO AUTHORIZE THE MAYOR AND ALDERMEN OF THE TOWN OF UNION TO ISSUE \$80,000.00 IN BONDS FOR THE PURPOSE OF PAYING PAST INDEBTEDNESS," will sell to the highest bidder therefor, for not less than par EIGHTY THOUSAND (\$80,000.00) DOLLARS worth of Town of Union Bonds on the 18th day of April, 1922, at eleven (11) o'clock, A. M., in the Office of the Mayor of the said Town of Union, S. C. Bonds to be dated the day of April, 1922, to bear interest at a rate not to exceed six (6%) per cent per annum, interest payable semi-annually, and to run for twenty (20) years from date of the said bonds. The bids will be sealed bids and the right is reserved by the said Mayor and Board of Aldermen of the said Town of Union, S. C., to reject any or all of such bids submitted. Each bidder required to furnish a certified check for ONE THOUSAND (\$1000.00) DOLLARS with said bids as evidence of good faith, same to become forfeited in event of failure to comply with said bids.

W. D. ARTHUR,

City Clerk and Treasurer.

R. P. MORGAN,
Mayor.